

# The CHANGES Programme:

## Quarterly Report: April - June 2002

The CHANGES  
PROGRAMME

### Basic Education and Policy Support (BEPS) Activity

CREATIVE ASSOCIATES INTERNATIONAL<sup>2</sup>

*In collaboration with*

CARE, THE GEORGE WASHINGTON UNIVERSITY, AND GROUNDWORK



United States Agency for International Development  
Contract No. HNE-I-00-00-00038-00

# **CREATIVE ASSOCIATES INTERNATIONAL<sup>INC</sup>**

## **The CHANGES Programme**

### **Quarterly Report No. 5: April – June 2002**

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Prepared for:

#### **Basic Education and Policy Support (BEPS) Activity**

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## I. EXECUTIVE SUMMARY

During the present quarter, two important reviews of the CHANGES programme were completed, and the findings of those reviews were used to fine-tune and strengthen the components of the programme. At the same time, considerable progress was made towards achieving short-term objectives as well as long-term goals. *(See Appendix A for the CHANGES programme description and deliverables.)*

After undergoing a review and refocusing during the preceding quarter and the beginning of the present reporting period, the **Community Sensitization and Mobilization Campaign (CSMC)** in Southern Province (SP) made considerable strides. In late April, a key meeting was convened in Livingstone, attended by several representatives of each of the three line ministries with which the CSMC is now closely aligned: Ministry of Education (MOE), Ministry of Health (MOH), and Ministry of Community Development and Social Services (MCDSS). During this meeting, the participants reviewed the ways in which the CSMC had been refocused to be a more genuinely Government of Zambia programme and reflected on what inputs and support will be required of each ministry—especially at the district and zonal levels—for the programme to succeed. Each ministry described what the situation is “on the ground,” who will be available at the zonal level to help implement the CSMC, and what are likely to be obstacles to implementation that will need to be overcome. In a real sense, this meeting marked a “new beginning” for the CSMC.

Subsequently, Zonal-level Community Facilitators (ZCFs) were recruited from Kazungula and Kalomo Districts (55 in all), trained, and deployed in their respective zones in multi-sectoral teams of three, each team comprised of one person from each ministry. Funds were then disbursed to each of the teams so they could undertake sensitizing and mobilizing communities. As such, the CSMC now reinforces, and in fact extends, the MOE’s decentralization agenda by allocating funds directly to the district level, and then further to the zonal level. As the quarter came to a close, five new Field Researchers were recruited, and the research and verification process was started in Choma District, the third district to participate in the CSMC.

The **School Health and Nutrition (SHN)** component in Eastern Province (EP) also registered significant progress during the present quarter. In early April, a meeting was held in Lusaka to disseminate the preliminary findings from the Phase I baseline survey that had been conducted in EP during October-November 2001. The findings that were reported included: the instruments that had been developed (tablet height pole, bilharzia questionnaire, and Cognitive Assessment Instrument) all functioned effectively as intended; there were high rates of worm infestation among pupils in the intervention schools (55% hookworm, 48% bilharzia); and the Cognitive Assessment Instrument (CAI) yielded data from each grade cohort that will provide a necessary baseline for comparison purposes when the follow-up Phase 2 survey is conducted this September. A small re-survey of four intervention schools conducted in April clearly underscored the efficacy of the bio-medical interventions being made: hookworm infections were reduced by 98% and bilharzia by 50%, both of which suggest a very low re-infection rate in the intervening six months since the pupils were first tested and treated. Moreover, anecdotal evidence from a number of teachers in intervention schools suggests that pupils who were treated

are more alert in school and are achieving better results even after only six months, which is encouraging.

During the present quarter, staff of the Tropical Disease Research Centre (TDRC) in Ndola were trained to undertake the sophisticated transferrin receptor analysis test on blood samples to assess the blood's capacity to absorb iron. Not only was this training essential for the SHN research in EP, it also demonstrated the SHN component's commitment to building long-term capacity in Zambia. Further, the drugs and micro-nutrients ordered from the UK arrived in Zambia, and the SHN programme is presently testing its drug distribution strategy, which involves channeling the drugs and micronutrients from Medical Stores Ltd. to District Health Management Teams (DHMTs) to Rural Health Centres (RHCs) and then to schools. By the end of the reporting period, 11 of 20 intervention schools had been mass treated, meaning that 2,325 pupils were dewormed and received iron and Vitamin A supplements. Also during this quarter, work was started to link the health MIS (management information system) with the MOE's evolving EMIS/DEMIS systems, plans were put in place to establish demonstration SHN schools in EP, and concrete steps were taken to scale-up the SHN programme not only to two further districts in EP, (Mambwe and Lundazi) but also to several districts in Central and Lusaka Provinces. One of the justifications for scaling-up the programme was the favorable review of the SHN programme conducted by a representative of USAID/Washington during March-April of this year.

Considerable headway was made in implementing **HIV/AIDS** initiatives, a cross-cutting component of the CHANGES programme. In EP, a series of training workshops was conducted on HIV/AIDS for teachers, head teachers, and Anti-AIDS Club patrons in HIV/AIDS awareness, counseling, and materials development. In all 89 people were trained, and each workshop drew participants from each district of EP as a way to enhance the multiplier effect when they return to their schools and will train others in the same content and methodologies. Beyond this, in EP the HIV/AIDS community sensitization and mobilization in 40 school catchment areas was completed by the five popular theatre groups who had been contracted for that purpose, and a two-day meeting was convened at the conclusion of that process to encourage the theatre groups to share their experiences, to learn from each other, and to plan future community sensitization efforts. Also in EP, plans were completed to conduct research on the cultural and linguistic dimensions of HIV/AIDS counseling, which will be a collaborative effort between expatriate consultants and Zambian professionals. In SP, the community sensitization and mobilization efforts by Zonal-level Community Facilitator (ZCF) teams got underway this quarter, as well as the research and verification in Choma District, both of which will address HIV/AIDS in rural communities.

The pace of progress of the **Small Grants Mechanism**, another cross-cutting dimension of the CHANGES programme, has also increased, although the actual provision of grants is still being slowed by the unavoidable length of time it takes for communities to submit acceptable proposals and for those proposals to be vetted and approved. That said, in EP four proposals have been approved for funding, and in SP one proposal has been approved. Importantly, with continued training and capacity-building, the quality of community action plans and proposals in both provinces is improving, evidenced by a gradual shift from plans and proposals focused on infrastructure inputs to activities centering more on training, capacity-building, and local initiatives to address concrete issues in health and nutrition, girls' education, and HIV/AIDS.

Finally, several important developments in terms of **Programme Administration** took place during the present reporting period. Most local staff budgeted in the CHANGES contract were hired, including a Training Specialist in SP as well as a Secretary and, in EP, a SHN Training Officer and an additional Driver. The addition of these staff has significantly bolstered the capacity of the two field offices. Further, an additional vehicle was purchased and deployed in EP, primarily for use on the small grants side of the SHN programme; CARE International, who is administering the small grants, agreed in turn to deploy its vehicle in SP, which means each field office now has three vehicles. This should go a long way toward alleviating the transport shortage that has affected both field offices to date. Finally, the interim CHANGES Programme Manager from the Creative Associates International home office in Washington, DC traveled to Zambia for ten days in June to review progress. He met with the Senior Technical Advisor in Lusaka and with both provincial Coordinators to discuss successes, issues, and challenges, and to support the programme in general. While in Zambia, he also met with representatives from the MOE and USAID.

During the next reporting period, the new long-term Programme Manager will be posted at the home office in Washington to backstop the CHANGES programme; he will come to Zambia in August or September to become acquainted with the programme, its staff, MOE and other line ministry counterparts, and donor colleagues.

## II. ACCOMPLISHMENTS/ACHIEVEMENTS DURING THE QUARTER

In this section, the progress and achievements attained during the quarter of April-June 2002 will be highlighted for both of the major components of the CHANGES programme and their corresponding USAID Intermediate Results (IRs)—the Community Sensitization and Mobilization Campaign (CSMC) and School Health and Nutrition (SHN)—as well as the two cross-cutting components: HIV/AIDS and the Small Grants Mechanism.

### A. Community Sensitization and Mobilization Campaign (CSMC) (IR 2.1: Improved Quality of Learning Environments in Targeted Areas)

#### 1. Progress on Indicators

Priorities/Category	Indicator	Means of Verification	Target	Actual as of 06/02
1. Participation of girls & other vulnerable children in basic education.	Increase in % of enrolment & retention rate of girls & other vulnerable children in basic education.	<ul style="list-style-type: none"> <li>Yearly school records (<i>Data collected from five selected schools in each district</i>)</li> </ul>	Enrolment: 22%  Retention: 50%	<ul style="list-style-type: none"> <li>Enrolment Baseline: 16% increase from 2000 to 2001</li> <li>Retention Baseline: N/A</li> </ul>
<i>Indicator 1:</i> The Enrolment Baseline of 16% increase in girls' enrolment from 2000 to 2001 was obtained from Provincial records. For that same period the enrolment increase was 22% for boys. The target for girls' enrolment has been set at 22% in an effort to see girls' enrolment increased to be at par with boys' enrolment. Retention rate target has been set at 50%. Although no baseline information is available for this indicator, it was felt that the USAID target of 87% would be more attainable if the programme was working in urban areas. The high number of rural schools selected as research sites has influenced CSMC to set the retention target at a lower rate.				
2. Sensitization & Mobilization	Number of schools, communities, local leaders, PTAs and pupils sensitized and mobilized (to take action) concerning HIV/AIDS and girls'/vulnerable children's education.	<ul style="list-style-type: none"> <li>Zonal-level Community Facilitator Action Plans</li> <li>Field Reports</li> </ul>	168,600	818
<i>Indicator 2:</i> There are 843 schools in the Southern Province. It is anticipated that at least 200 individuals within each school catchment area will be sensitized and mobilized as a result of the CSMC programme.				
3. Gender & Equity	Number of provincial/district and zonal officials, and community-based animators sensitized & trained in gender & equity issues in education	<ul style="list-style-type: none"> <li>Workshop attendance figures.</li> </ul>	275	159
<i>Indicator 3:</i> There will be approximately 25 participants from the zonal-level in each district trained as Zonal-Level Community Facilitators. Gender and equity sensitization will be a part of that training curriculum. Therefore, a target total of 275 has been set as all 11 districts in Southern Province are reached.				

Priorities/Category	Indicator	Means of Verification	Target	Actual as of 06/02
4. Action Research	Number of communities participating in action research.	<ul style="list-style-type: none"> <li>Researchers' Field Reports</li> </ul>	330	85
Indicator 4: Six villages will be selected in each of the five selected school catchment areas in each district. This is 30 villages per district for a total of 330 villages in all 11 districts.				
5. Research & Verification	Number of community members present to verify research.	<ul style="list-style-type: none"> <li>Head count by Researchers</li> </ul>	22,000	818
	Number of TFD performances for verification and research.	<ul style="list-style-type: none"> <li>Researchers' Field Reports</li> </ul>	110	20
Indicator 5: There are a total of 55 school catchment area research sites. Two drama presentations will take place in each catchment area to verify research findings, for a total of 110 drama performance. It is anticipated that at least 200 community members will attend each of the performances.				
6. Participatory Monitoring	Number of community activities (as mentioned in action plan) monitored.	<ul style="list-style-type: none"> <li>Monitoring plans &amp; reports</li> </ul>	843	20
	Number of communities monitoring their own progress.	<ul style="list-style-type: none"> <li>Monitoring plans &amp; reports</li> </ul>	1,686	30
Indicator 6: With 843 school catchment areas in the Southern Province, it is anticipated that at least two communities in each catchment area will have action plans that will be self-monitoring. At least 50% of those community-based action plans will be monitored by Zonal-level Community Facilitation teams, District officials, and/or the CSMC Core Team members.				
7. Life Skills	Number of Zonal-level action plans, including training on the use of Life Skills modules.	<ul style="list-style-type: none"> <li>Zonal-level action plans</li> </ul>	138	0
Indicator 7: 275 Zonal-level action plans are expected to be developed. Half of those are targeted to include training on the use of Life Skills modules.				
8. Information, Education, and Communication (IEC) Interventions	Use of variety of communication media focused in promoting girls' and other vulnerable children's education, and in sensitizing community members (including teachers, children) about HIV/AIDS proliferation and its mitigation.	<ul style="list-style-type: none"> <li>Actual media products</li> </ul>	11	1 (Role Model Booklet)
Indicator 8: The target of 11 media products is comprised of 2 radio programmes for HIV/AIDS, 2 radio programmes for girls' education, 4 supplementary readers on issues of HIV/AIDS or girls' education, 2 illustrated annual reports for stakeholders, and 1 CSMC newsletter.				



Priorities/Category	Indicator	Means of Verification	Target	Actual as of 06/02
9. Action Plans	Number of action plans developed by districts (Zonal-level Community Facilitators).	<ul style="list-style-type: none"><li>Actual count of action plans filed at district, zonal and CSMC offices</li></ul>	77	23
	Number of communities developing community action plans.		1,686	35
Indicator 9: Approximately 7 Zonal-level Community Facilitator teams will be established in each district and each will develop an action plan for sensitization and mobilization. A total of 77 will be developed for all eleven districts.				
10. Capacity-building at all levels	Number of provincial, district, and zonal-level officials and community-based animators able to facilitate community-based activities in participatory ways.	<ul style="list-style-type: none"><li>Workshop participant list</li></ul>	275	159
Indicator 10: There will be approximately 25 participants from the zonal-level in each district trained as Zonal-level Community Facilitators. Therefore, a target total of 275 has been set as all 11 districts in Southern Province to be reached.				

## 2. Highlights

### Review and Refocusing of the CSMC:

Started in the previous reporting period, the review and subsequent refocusing of the CSMC by Dr. Janet Robb, former CAII, Division Director who designed the CSMC, was completed on 2 April when she gave a debriefing of her work at the CHANGES office in Lusaka. The debriefing was attended by representatives of the MOE's Equity and Gender and HIV/AIDS components, USAID, UNICEF, and the CHANGES programme. During the meeting, Dr. Robb described how the CSMC had moved away from its original intent and design due to some misunderstandings and how, in discussions with the provincial MOE staff and the CSMC team, it was agreed that several corrective measures needed to be taken to ensure that the programme attains its goals and objectives.

Most central of these measures was the recruiting and training of zonal-level government officers from the MOE, MOH, and MCDSS as Zonal-level Community Facilitators (ZCFs) to sensitize and mobilize communities, rather than utilizing community mobilizers from individual communities to perform that role. This modification in approach gave the CSMC considerably more geographical reach than it had previously and enabled the programme to include significantly greater numbers of schools and communities (with action plans) within its purview. Moreover, the refocusing enhanced the prospects of capacity building within the government system and, by extension, the likelihood of the CSMC's sustainability, insofar as it is now the government itself, through the ZCFs, that is working with communities at the grassroots level.

### **Meeting with Three Line Ministries to Review the Refocused CSMC Work Plan and to Plan the Training of Kazungula District Zonal-level Community Facilitators (ZCFs):**

The significant shift in strategy described in the previous section required considerable re-orientation and planning. Therefore, on 24 April, a full-day planning meeting was held at the Provincial Resource Centre in Livingstone, attended by several representatives from each of the three collaborating line ministries (MOE, MOH, MCDSS), CHANGES staff, and two consultants from Malawi who had recently arrived to assist with developing and delivering the first training course for ZCFs (see below). During the meeting, the revised design of the CSMC was presented and discussed, and each ministry described the personnel they have available at the zonal level to work as community facilitators to sensitize and mobilize communities. In addition, some key issues regarding implementation of the CSMC were discussed, for example, how the triadic zonal-level teams comprised of one representative from each line ministry will be formed and deployed, how funds will be channeled to the teams, expended, and retired according to USAID regulations, and so on. The meeting represented a positive “new beginning” of the CSMC at the ground level.

### **Training of Trainers and Training of ZCFs from Kazungula District:**

Two consultants from Malawi came to Zambia for approximately one month during April-May to work with the CSMC team. Their assignment was to develop the course to train ZCFs, to train trainers for the course, and to assist in the delivery of the first course for ZCFs from Kazungula District. These consultants were brought in because they are from CRECCOM (Creative Centre for Community Mobilization), a NGO in Malawi that for more than seven years, has been implementing a nationwide social mobilization campaign in Malawi, after which the CSMC is patterned. *(See Appendix B for the CRECCOM consultants' report.)*

The course was designed, and five trainers (comprised of CHANGES and MOE staff) were trained during the week of 22-27 April. The training of the ZCFs from Kazungula then took place during 29 April through 10 May in Livingstone. In all, 23 ZCFs (nine teachers, six nurses, two clinical officers, and six Community Development Assistants) attended the training. A total of 30 participants (three each from the 10 zones in the district) were expected, but seven were unable to attend the training on such short notice and were, therefore, trained later by the other members of their three-person teams, while others participated in the same training for ZCFs from Kalomo District several weeks later (see below). Three district-level staff also attended the training, one from each line ministry, and six staff from the provincial ministries attended as both participants and facilitators. Thus, in all, 32 participants attended the training.

The 12-day training had both a theoretical and an applied focus and addressed topics such as: action research, gender and equity issues, HIV/AIDS issues, strategies for sensitizing and mobilizing communities, and organizing community-based workshops, resource mobilization, monitoring and evaluation, developing action plans, and budgeting. In the latter part of the workshop, each zonal team developed an action plan and budget for the first six-month period (total: 10 zonal-level action plans) during which they will conduct sensitization and mobilization workshops for community leaders, teachers, and PTAs, assist them in developing community actions plans, and assist with starting the implementation of those community action plans.

### **Multi-Sectoral Meeting in Kalomo District to Plan Implementation of the CSMC:**

On 17 May, a planning meeting was conducted in Kalomo District. It was attended by representatives of the MOE, MOH, MCDSS, and CHANGES to lay the groundwork for implementing the CSMC in that district. The design of the programme was explained, and zonal-level officers from each ministry were identified to assist in implementing the CSMC in the 13 zones of the district. Then a mapping exercise was conducted to identify the schools, Rural Health Centers, and Sub-centers for Community Development in each of the zones. Each ministry plotted their centers on the zonal maps and included the names of schools in each zone as well. Finally, the venue and dates for the training of the ZCFs were finalized.

### **ZCF Training Workshop in Kalomo District:**

The ten-day training of ZCFs from Kalomo District, patterned after the pilot course conducted for ZCFs from Kazungula District in May but shortened by two days, was delivered during 3-13 June at the Council Planning Hall. In all, 32 ZCFs participated in the training from the 13 zones: 13 teachers, 13 Environmental Health Technicians from the RHCs, and six Community Development Assistants (CDAs). Additionally, the Provincial In-service Provider, two District In-service Providers (one each from Kazungula and Kalomo), the Kalomo DEO and EO (Education Officer), the Director of the Kalomo DHMT (District Health Management Team), and the Assistant Planning Officer (Council, Kalomo) attended and actively participated in the workshop.

CSMC staff were the lead trainers for the workshop, assisted in significant ways by counterparts from the provincial MOE who facilitated sessions on education policy, gender and equity, HIV/AIDS, elements of good planning, and effective utilization of resources. The content of the training workshop was similar to what was delivered in the pilot training of Kazungula District ZCFs, but in this course the participants were given time to organize a practice workshop on how they intend to localize topics on gender and equity in education and on HIV/AIDS at the grassroots level. The participants, in their triadic teams, prepared training plans, which they presented in plenary sessions. During the mapping and planning exercise, participants again in their zonal teams, drew maps of their respective zones and identified all the schools, including community schools in their zones. On the basis of that mapping exercise, work plans for sensitizing and mobilizing communities were developed, including budgets for carrying out the activities. The action plans and budgets were then given to the CHANGES team for approval.

### **Meeting in Choma District for School Site Selection:**

With activities underway in Kalomo District, the CSMC prepared to expand its operations to a third district, Choma. On 5 June, the Senior Planning Officer from the provincial MOE and CHANGES staff met with officers from Choma District (Education Officer, District Inspector of Schools, DIS), District In-service Provider (DIP), Director of DHMT, and a Choma Council representative). The purpose of the meeting was to seek advice from the district team on the selection of the five schools and catchment areas in which to conduct the research and verification in the district, which would form the basis of other CSMC activities later on.

The SP Coordinator introduced the CSMC programme objectives and its conceptual framework, and then discussion turned to identifying the five schools and catchment areas in which to conduct the research and verification. In an effort to select a representative sample of catchment areas in the district, the following criteria were put forward by the CSMC team for consideration: local language, cultural practices, socio-economic status, location, infrastructure, HIV/AIDS prevalence, and enrolment rate of girls. When invited to add further criteria, the district team recommended that all five Chieftaincies be represented, and proposed additional criteria such as areas with high rates of prostitution and high numbers of orphans, population density, and geographical diversity (plateau, valley). On the basis of this wide-ranging discussion, the following five schools were selected:

<u>School</u>	<u>Chieftaincy</u>
1. Shampande (Upper Basic)	Singani (urban)
2. Ndondi (Upper Basic)	Moyo
3. Mayasanino (Middle Basic)	Hamaundu
4. Mapanza (Middle Basic)	Mapanza
5. Macha Central (Middle Basic)	Macha

The district team agreed to undertake responsibility for visiting all the five schools to brief the head teachers and the headmen of the catchment area communities, and to arrange accommodation for the field researchers who would soon begin the research and verification.

### **Research and Verification in Choma District:**

Two teams, each comprised of seven field researchers, started the research and verification process in Choma District in mid-June; two teams are being deployed in the same district in this case as a way to accelerate the research and verification due to delays that occurred in starting the CSMC in Choma District. Two drama performances are scheduled to take place on 25 July in Mapanza Middle Basic and Macha Middle Basic Schools.

### **Disbursement of Funds to Kazungula District ZCF Teams:**

On the surface of it, disbursing funds to ZCF teams to carry out their work at the zonal-level appears to be a mundane task that does not warrant special mention in a quarterly report. However, channeling funds directly to zonal-level government officers within the MOE system is unprecedented and, in that sense, the CHANGES programme is sailing in uncharted waters. In doing so, the programme is taking the MOE's agenda of decentralization closer to the grassroots level than what is intended in the ministry's decentralization plan. For this reason, it is worth mentioning that on 7 June, funds for ZCF teams from Kazungula District were disbursed directly to the teams according to their approved budgets to start the community sensitization and mobilization process in their zones. An officer from the Kazungula DEO office assisted in the disbursement process.

## Monitoring of Zonal-level Activities in Kazungula District:

A plan for monitoring the work of ZCFs in Kazungula District was developed by the CHANGES team in collaboration with representatives of the three line ministries in the district. District-level officers monitored most of the two-day workshops for 135 community leaders, teachers, and PTA members that were facilitated by the ZCF teams in four of ten zones during late June (the remaining workshops in six zones to be completed in July). The purpose of the monitoring was, first, to support and give further guidance to the ZCFs and, second, to ascertain the effectiveness of the initial training the ZCFs received and what adjustments may need to be made in future ZCF training workshops. In general, it was agreed that the quality of the workshops was variable, and some important observations were made that will be fed into the planning of future trainings of ZCFs as the CSMC expands to additional districts.

## Progress on Kazungula and Kalomo District Profiles:

Some unavoidable delays have cropped up in finalizing the district profiles from Kazungula and Kalomo. The Kazungula District Profile has been edited, and a decision on final formatting, use of the MOE logo on the cover, and final approval from MOE/HQ to proceed with printing were awaiting the return of the Equity and Gender Focal Point Person from an extended trip to the US. The Kalomo report is presently being edited by Professor Mapopa Mtonga of UNZA and should be ready to be finalized during the next reporting period.

## Information, Education, and Communication (IEC) Initiatives:

During June, the IEC consultant at the MOE/HQ, Mr. Musonda, traveled to Livingstone to confer with the CSMC team about their proposed IEC products. While in Livingstone, he reviewed the IEC items in their two-year work plan and visited schools in Livingstone and Kazungula Districts during which time he took photos for future use in publications. The consultant also typeset and edited the CSMC book on role models, entitled “Making a Difference,” which will be completed next quarter.

## B. School Health and Nutrition (SHN) (IR 2.2: Improved Delivery of School-based Health and Nutrition Interventions to Support Pupil Learning)

### 1. Progress on Indicators

Category/Level	Indicator	Means of Verification	Target Numbers	Actual Numbers
<b>Child Quality Measures</b>				
Education	Increase in cognitive assessment scores	Scores from Cognitive Assessment Instrument (CAI)		Phase 1 of baseline survey completed in October/November 2001 (sample: 1392 pupils).
Health	Reduction in worm infection prevalence	Semi-annual parasitological assessment	Reduction in infection shown in sub-sample done in April 2002-141	Phase 1 of baseline survey completed in October/November 2001 Bilharzia prevalence was

Category/Level	Indicator	Means of Verification	Target Numbers	Actual Numbers
			pupils	24% in re-infection study compared to 48% at baseline Hookworm reduced from 55% to 8%.
Nutrition	Increase in hemoglobin levels	Semi-annual biomedical assessment	Sub-sampling to be done in April 2002-141 pupils	Phase 1 of baseline survey completed in October/November 2001 (sample: 1,400 pupils) Anemia increased from 33% at baseline to 75% in April-due perhaps to famine conditions experienced during previous 4 months. Malaria could also be a factor.
<b>Community Sensitization and Mobilization</b>				
PTA/Community meetings/ADC (Area Development Committee)/ Neighborhood health committee	# of meetings to discuss SHN issues; problems-analyzed and responded to.	Survey reports; field monitoring –minutes of meetings	By end 2002, 100 meetings held by PTAs, ADCs, and Neighborhood Health Committees	40 communities and school catchment areas (approx. 10-12 schools/catchment areas) sensitized through popular drama/public meetings and discussions with headmen 80 meetings of PTA and SHN promoting committees held.
PTA/Community action plan development and implementation	Increase of PTAs/communities supporting SHN interventions with specific action plans	Survey reports; field monitoring	Cumulative total of action plans received 2001-31 2002-60 2003-80	62 community action plans developed- and submitted for small grant funding.
<b>IEC</b>				
Media strategy	Media strategy developed and implemented including radio, TV adverts, newsletters, and newspaper.	Strategy available	Media strategy (regional and national)	Media strategy developed
IEC materials	IEC materials developed for SHN advocacy and Training	IEC materials available	2002-12 products Radio spots- TV spots- Pamphlets Newsletters Brochures 2003-15 new	Radio programmes broadcasts during last quarter- 2x per month on SHN and HIV- SHN posters and brochures distributed to all EP districts.

Category/Level	Indicator	Means of Verification	Target Numbers	Actual Numbers
			products	
Teachers/pupils	# teachers using IEC materials for SHN teaching, including life skills	Observation/monitoring of teachers	2002-150 teachers trained 2003-150 trained 2004-50 trained	120 Teachers using worm HE flipchart, local action manual and brochures.
<b>Training</b>				
Teachers and administrators	# of teachers trained in school-based health and nutrition interventions	Reports	2002 –250 2003-350 cumulative total teachers trained administers 2002=50 2003=100 2004=200	207 teachers and MOE, MOH, and MCDSS administrators trained in SHN interventions; 20 teachers and DIPS (District In-Service Providers) trained to administer the CAI.
Pupils	# of pupils who have received the set number of health education lessons	Reports	By end 2002 15,000 pupils received the lessons By end 2003 25,000; by March 2004, 30,000	To start in 2002 Based on pupil enrolment in 80 selected schools 10,000 pupils benefiting from HE lessons.
Health workers, community leaders, PTA members	# PTA exec. members, ADC, trained in collaborative methods, group participation techniques, SHN advocacy, and management skills  # Health workers trained in SHN advocacy and SHN issues	Reports and field monitoring	By end 2002, 400 trained; by end of 2003, an additional 250 PTA, health workers and community leaders trained; by March 2004, a further 100 additional	Management skills training of 50 teachers-including basic financial management as part of small grant component with CARE International.  PTA executive orientations scheduled for the 3 <sup>rd</sup> Quarter. 20 health workers oriented on SHN with PTA members and teachers from nearby schools.

## 2. Highlights

### Dissemination of Findings from Phase I Baseline Survey:

On 4 April, a half-day meeting was convened at the Fairview Hotel in Lusaka to present the preliminary findings of the baseline survey (first phase) that was conducted in EP during October-November 2001. The meeting was attended by approximately 40 people representing BESSIP (MOE), the University of Zambia (UNZA), the University Teaching Hospital (UTH), the Tropical Diseases Research Centre (TDRC), USAID, and the CHANGES programme. Dr. Musonda, BESSIP Coordinator, opened the meeting, and Dr. James Mwansa of UTH commenced the proceedings with an overview of bilharzia in Zambia, the need to collaborate more intensively to come to grips with the problem, and the importance of strengthening the

Zambia Bilharzia Task Force. Then, Mrs. Catherine Phiri, BESSIP SHN Component Manager, provided an overview of the SHN programme in the MOE, and this was followed by a presentation by the EP Coordinator on SHN implementation issues in EP. The meeting then moved into a presentation and discussion of the findings from the survey, as summarized briefly below.

***a) Biomedical Findings:***

Dr. Lesley Drake and Dr. Michael Beasely of the Partnership for Child Development (PCD), one of the CHANGES programme's implementing partners, summarized the results of the biomedical results (*For a more detailed description and analysis of the findings, see PCD's Baseline Survey Report in Appendix C*).

- 1,392 pupils from 20 intervention schools in EP were studied, 10 each from Grades 1-7, with a shortfall of 8 pupils from the intended sample of 1,400 pupils. Of the pupils studied, 50.3% were boys and 49.7% were girls.
- Growth indicators of the intervention population revealed the following:
  - Stunting: 36% of all children
  - Underweight: 22% of all children
  - Thinness: 21% of all children
- Prevalence of hookworm: 55% (with a mean intensity of 247 eggs/gram of feces).
- Prevalence of bilharzia: 48% (with a mean intensity of infection of 77 eggs/10 ml. of urine (the World Health Organization cutoff for severe infection is 50 eggs/10 ml. urine). The research found considerable variation in intensity of infection according to age.
- Prevalence of roundworm and whipworm: less than 2%.
- Prevalence of anaemia: 33% with 0.5% of pupils studied severely anaemic.
- The schistosomiasis questionnaire that was developed and used to detect bilharzia on the basis of pupils' self-reporting was found to be highly effective.

The presenters concluded that, because the schistosomiasis questionnaire, while effective, underestimated the actual rate of bilharzia infection by 15%, the prevalence rate of 48% suggested the need for mass treatment of all pupils in the schools inasmuch as WHO (World Health Organization) guidelines stipulate mass treatment for an infection prevalence of 50%.

***b) Cognitive Assessment Findings:***

Dr. Elena Grigorenko of Successful Intelligence (SI), Yale University, which is also a CHANGES implementing partner, presented the findings from the first phase of the baseline survey from the application of the Cognitive Assessment Instrument (CAI), which is being used to measure gains in cognitive ability and functioning as a result of the biomedical interventions:

- The CAI appears to be psychometrically sound. The entire test, as well as all of its subtests (components), provides reliable and consistent information when (a) the same child is tested twice across time and across raters, and (b) when the child's performance is compared on different items within one subtest. Moreover,



the test provides consistent information that correlates with information provided by other tests previously used in Zambia or elsewhere in Sub-Saharan Africa.

- Data from the CAI correlates moderately with the National Assessment Tests of English and Mathematics for Grade 5 (NA-G5). Similarly, the CAI correlated moderately with other tests of cognitive functioning (e.g., tests of fluid and crystallized abilities). These results are encouraging because they indicate that, although the CAI taps into the domain of psychological functioning that is relevant to schooling, it provides some unique information on the child's cognitive functioning that is not reflected in either educational achievement tests or in general abilities tests.
- The results of the NA-G5 indicated that children in the Phase I sample performed at the same level as those surveyed by the Zambian Examination Council (ECZ). Since this data collection was the first large-scale data collection using the CAI, no statements can be made about the comparative level of functioning of the children surveyed during Phase I.
- The analysis revealed several interesting findings that warrant further investigation:
  - Pupils appear to have performed better on the CAI when it is administered in Chinyanja than when it is administered in English. This link deserves further investigation.
  - One subtest of the CAI, the practical reasoning subtest that includes both verbal and mathematical reasoning tasks, appears to be providing data that are especially interesting. It, first, diversifies the population of children and, second, while it correlates highly with other subtests of the CAI, it does not correlate with the NA-G5 data. This finding should also be investigated further.

While the results of the CAI that were presented were interesting, the true value of developing and administering the CAI will be realized after the results from the Phase II survey (to be conducted in September 2002) are in-hand and comparisons can be made with the results from Phase I. It is only then that the gains in cognitive ability and functioning achieved from the biomedical interventions will become apparent.

### **Sub-Sample Survey to Determine Re-infestation Rates:**

During 8-11 April, the EP Coordinator and Dr. Michael Beasley of PCD conducted a sub-sample survey in four intervention schools in EP to determine the re-infection rates for bilharzia and worms. One hundred forty one (141) pupils from the four schools were re-tested (having originally been tested during the November 2001 baseline survey), and the results showed that the antihelminthic (deworming) treatments given last November had been highly effective. The prevalence of hookworm was 8% (compared to 55% at baseline), and the mean intensity of infection had fallen significantly from 247 eggs per gram of feces at baseline to 6 eggs per gram at the follow-up, a reduction of 98%. Because morbidity (illness) is directly related to the intensity of infection, this indicates that the treatment has been highly effective and has significantly reduced morbidity.

With regard to bilharzia, the sub-sample survey registered a prevalence of 24% (compared to 48% at baseline), and the mean intensity of infection had fallen from 77 eggs/10 ml. urine to 21 eggs/10 ml. urine. Most infections observed at that time were very light, again suggesting that morbidity has been significantly reduced. The findings of the follow-up sub-sample survey indicate that treatment for bilharzia may need to be done only once per year, which would reduce costs and programme/personnel time with regard to expanding the SHN programme within EP and to other provinces.

### **Training of TDRC Staff in Iron Analysis:**

During 8-19 April, Mr. Richard Suswillo and Dr. Deborah Nolder of PCD trained staff from TDRC in how to conduct transferrin receptor analysis, a test for detecting iron deficiency anaemias. The purpose of conducting the training was to build the capacity of TDRC to undertake the required iron testing of the nearly 1,400 blood samples taken during the baseline survey in EP, and to conduct similar analyses after the second survey in September 2002. Results from the iron testing as well as the testing of Vitamin A levels, both conducted by TDRC, are not yet in hand. *(For more detailed information on the PCD training of TDRC staff and the iron analysis conducted, see [Appendix 1] of PCD's Baseline Survey Report in Appendix C of this report.)*

### **Planning for the Phase II Baseline Survey (September 2002):**

On 4 April, a meeting was held at the CHANGES Lusaka office, attended by 14 people representing the MOE, MOH, UTH, TDRC, PCD, SI, and CHANGES, to begin planning the Phase II baseline survey. During the course of the meeting it was provisionally decided that the survey will begin on 16 September and be completed by 2 October. Also determined during the meeting were the number of teams that will be required to complete the survey in the time anticipated, the desired composition of the teams, and how the costs for conducting the survey will be apportioned among the groups represented. This planning meeting went a long way towards setting in motion advanced planning that should facilitate smooth implementation of the Phase II survey, which will be considerably more demanding than the Phase I survey because it will involve the collection of twice as many samples. Moreover, there will be a concomitant increase in the complexity of carrying out the survey, the personnel (parasitologists, clinical officers, nurses, laboratory technicians, and cognitive testing teams) required, and the vehicles needed.

This planning was followed-up in May when Ms. Paula Kapungulya, SI's local consultant, worked with the EP Coordinator in Chipata to visit relevant institutions, to recruit biomedical personnel, and to identify facilities and equipment needed for the September 2002 survey. Letters were written to directors of the hospital board and the veterinary laboratory to obtain the release of personnel to participate in the survey. Also, a commitment was secured from the Provincial Resource Centre to use their facility as a venue for data analysis, storage, and central nerve centre during the survey. Further planning for the September survey is ongoing.

### **Planning for EMIS Development:**

On 5 April, two meetings were held at the CHANGES office, attended by representatives of BESSIP SHN Focal Point, the USAID-funded EMIS team at the MOE, HEARD (University of Natal, South Africa), PCD, SI, and CHANGES to discuss the development of a health MIS system (utilizing data from the School Health Card) and linking it with the larger MOE EMIS/DEMIS system that is being established. A follow-up meeting was held in Chipata between the EP Coordinator and the MOE EMIS team (Drake Warrick and George Caldwell) to further discuss data collection procedures, training for district and provincial staff, involvement of resource centres in the EMIS initiative, and ways to strengthen overall collaboration.

### **SHN Programme Review/Verification:**

Dr. Brad Strickland (USAID/Washington Cross-Sector Education Advisor) visited EP from 22 March to 2 April to review the SHN component after one year of its inception and to verify some of the data the component had reported during the previous year. While in EP, he interviewed provincial and district staff and NGO representatives, and visited five intervention schools. During these discussions and visits, Dr. Strickland obtained information on programmatic progress, sought clarification of SHN systems development, reviewed future plans, and identified needs for additional technical and resource assistance. In general, his visits to schools and interviews with key provincial and district officers confirmed that the SHN programme is moving ahead as anticipated. He noted, from information received from teachers, that pupils are already showing signs of being more alert and of achieving at a higher level than was the case before their participation in the SHN programme.

### **Phase I Baseline Survey Follow-up (Mass Treatment):**

A major activity during May and June was the preparation and administration of drugs for mass treatment in the first 20 intervention schools. Eleven of the 20 schools had a higher than 50% infestation rate for bilharzia, and these were targeted as priority schools for mass treatment. A schedule was drawn up, and all schools were informed to alert pupils and to request that they bring food (to settle their stomachs when taking the drugs) and to inform nearby health center staff of the impending activities. More than 600 pupils were treated in Cronje School, and mass treatment was also carried out in Nyaviombo and Vizenge Schools in the initial phase of mass treatment. The mass treatment of each school took approximately four hours and required the involvement of all teachers to organize and record the proceedings. By the end of June, all 11 schools with a 50% or higher prevalence of bilharzia infection were mass treated, including a total of 2,325 pupils. The remaining nine schools in the first group of 20 intervention schools will be mass treated when the new order of drugs arrives at their local RHC. A total of 28,000 pupils will eventually receive treatment.

### **Drug Receipt and Distribution:**

After several delays, the order for deworming drugs and micronutrients that had been placed earlier in the year, arrived in Lusaka in late May. The shipment was cleared by the MOE and sent to Medical Stores Ltd. for quality control testing; the drugs were approved and then shipped

by truck to EP on 13 June, arriving at the DHMTs several days later. In the meantime, the SHN team drafted drug disbursement guidelines, compiled the quantities of drugs to be received at each school, and forwarded that information to DHMTs and RHCs. The delivery of the drugs and micronutrients to designated schools should soon be completed, and then the remaining nine intervention schools will be mass treated.

### **Training of Rural Health Center (RHC) Staff:**

The EP Coordinator and CHANGES staff, with Mr. Herbert Soko of the Chipata DHMT, continued the orientation and on-the-job training of staff of RHCs that was started during last reporting period when staff from 17 RHCs had been trained. During May, staff from an additional six RHCs were trained in general SHN issues, bringing the total to 23 RHC staff trained.

### **Completion of the SHN Teacher Training Manual:**

The recently hired SHN Training Officer, Mr. Benedicto Phiri, completed work on the first draft of the SHN drug administration training manual, to be used for the training of new teachers from schools coming on-line for the SHN programme as well as for training teachers from scale-up districts in EP (Mambwe and Lundazi) and districts in Central and Lusaka Provinces (see below for preliminary details on scale-up activities). In addition to information on worm infestations and the drugs used to cure them, the manual includes material on health-promoting schools, community participation, and guidelines for establishing SHN committees. The first small batch of copies will be printed in July for the training of teachers before the start of the Phase II survey in September. Copies of the manual will be provided to PCD for their input, and revisions will be made accordingly before the manual is mass printed.

### **Planning for the Establishment of Demonstration SHN Schools:**

During the present quarter, the CHANGES SHN team, in collaboration with the provincial MOE, initiated the process of establishing demonstration SHN schools, starting with two: Cronje and Mgweru. Initial activities included meeting with school staff, electing officers, and developing or revising action plans. These schools (with more to come on board in the future) will have all the elements of a good SHN programme: positive school-community relations, active participation of the PTA, a viable local production unit (school garden), a drama group, good links with the local health center and neighborhood health committees, and links with local community workers. They will also be recipients of small grants, as administered by the CHANGES programme. Cronje School will partner with one school each from Chadiza and Chama Districts as a way to link districts and to share ideas.

The intention of the demonstration school initiative is to strengthen the previously noted elements in each of the schools so they can serve as model schools from which other schools can learn and to which they can aspire. Importantly, the inputs that are being made are programmatic and community-oriented, not financial, which should enable the initiative to avoid the sort of demotivating impact demonstration schools often have on other schools because of the high level of resources they receive in being made demonstration schools in the first place.

### **Laying the Groundwork for Scaling-up the SHN Programme:**

As part of the drive to scale-up the SHN programme, CHANGES collaborated with the MOE to select 20 schools each from Mambwe and Lundazi Districts in EP to be included in a phased expansion of the SHN programme beyond the existing 80 schools in the CHANGES plan. The EP provincial office through the PEO and Mr. Chirwa (Provincial SHN Focal Point Person) will draw up a budget for a site visit to each of the schools to assess their suitability and accessibility for inclusion in the SHN programme. Plans will then be developed to train the teachers of those schools.

On 24 June the EP Coordinator participated in a meeting in Lusaka for the sensitization of officials and school heads from two districts in Lusaka Province (Lusaka and Kafue) as part of the scaling-up of the SHN programme under BESSIP. The Coordinator presented an overview of EP activities with his provincial counterpart Mrs. Chirwa. Mrs. Chirwa will continue to participate in the sensitization meetings for district officials from Central Province who are also part of the expansion of the SHN programme. Meanwhile, the Chipata Teacher Training College (TTC) also held sensitization meetings during 27-28 June to orient new teachers to the general SHN programme and to scale-up activities scheduled in Mambwe and Lundazi Districts. This latter initiative is significant for the SHN programme because it represents the introduction of SHN into the formal training of teachers. The CHANGES office provided materials and advice for these activities to Mrs. Zimba, the TTC SHN Focal Point person.

### **IEC/Media Activities:**

In EP, IEC activities this quarter included making an audio recording of a HIV/AIDS popular theatre play by Joseph Moyo Memorial Group that was broadcast on Radio Maria. The play has run for three weeks several times per week. More recently, the Mwananga theatre group arranged for an audio taping of their SHN drama, which also will be aired on Radio Maria several times each month. The two brochures (General SHN and EP Situational Analysis) that were completed during the reporting period were distributed during HIV/AIDS training in Katete. Distribution of the SHN poster, according to guidelines provided by the SHN MOE/HQ, was also undertaken during the quarter; posters have been distributed to RHCs in addition to schools and district and provincial training institutions. The EP Coordinator met with the SHN Focal Point person and the IEC Consultant to discuss plans for developing television adverts using the popular theatre groups.

During the present reporting period, the IEC consultant at the MOE/HQ also achieved the following:

- Collected data from Eastern, Lusaka, Copperbelt, Northern, Southern, and Western Provinces for future IEC products related to SHN.
- Facilitated a one-week seminar to edit the first issue of the SHN magazine, video recordings, door and car stickers, the SHN logo, and health education books from South Africa.
- Produced and distributed the first issue of the SHN News magazine and completed editing of the second issue.

- Facilitated the distribution of SHN brochures, posters, and a book on SHN guidelines for health promoting schools to all provinces.
- Designed, typeset, and edited the third SHN brochure.

### **Collaboration and Integration with Other Programmes and NGOs:**

A meeting of the HIV/AIDS Sub-Committee of the NGO Forum was held on 27 March, which Dr. Strickland, the EP Coordinator, and Mr. C.T. Mbewa (HIV/AIDS Provincial Focal Point Person) attended. The issues discussed in the meeting included the completion of a directory of NGOs and their HIV/AIDS-related activities, which is expected to be completed early in the next reporting period. Other issues discussed were approaches to counseling, and strengthening collaboration between the MOE and MOH.

Further, a meeting of the NGO Forum was held on 11 April and was attended by the EP Coordinator and Mr. Josias Zulu, the newly hired CHANGES SHN Technical Officer. Issues discussed in the meeting, in addition to the HIV/AIDS directory, included food distribution and criteria related to the selection of the Lutheran World Federation as the lead NGO for activities coordinated by the AIDS Alliance. Considerable discussion focused on issues related to teacher motivation in the face of the HIV/AIDS pandemic, hunger, and a likely increase in enrolment following the announcement of free primary education—all of which contribute to low motivation and which are related to the implementation of the SHN programme.

## **C. HIV/AIDS (Cross-Cutting Component)**

### **1. Progress on Indicators**

#### ***Southern Province:***

<b>Priorities/ Category</b>	<b>Indicator</b>	<b>Means of Verification</b>	<b>Target</b>	<b>Actual as of 06/02</b>
HIV/AIDS	Number of provincial/district and zonal officials, and community-based animators sensitized & trained in HIV/AIDS issues of transmission and proliferation.	Workshop attendance figures	275	151
There will be approximately 30 participants from the zonal-level in each district trained as Zonal-level Community Facilitators. HIV/AIDS sensitization will be a part of that training curriculum. Therefore, a target total of 275 has been set as all 11 districts in Southern Province are reached.				
HIV/AIDS Peer Educators	Number of Zonal-level action plans including the training of peer educators for HIV/AIDS	Zonal-level action plans	138	0
Of the approximate 275 Zonal-level action plans, 50% (138) of those are targeted to include the training of peer educators.				

**Eastern Province:**

Category/Level	Indicator	Means of Verification	Targets	Current Status
Teachers	# teachers using life skills Modules/lesson plans used in teaching.	Field monitoring	By end 2002-120 teachers using life skills modules By end 2003-250 By March 2004 Cumulative total =450	Workshop for Anti-AIDS clubs patrons (26) and Senior Managers (8) on HIV/AIDS issues and workplan development 30 Headmasters trained in HIV/AIDS issues.
School/Communities; Pupils and village communities	# schools engaged in debate competitions, quizzes, drama, choirs, essay writing, and various other innovative activities.	Field monitoring Reports	Situation analysis of Anti-AIDS clubs in 40 schools in 4 districts completed By June 2002  By end 2002, 40 schools engaged in activities- By end 2003, 80 By March 2004, 90 schools	15 Teacher-counselors trained in use of counseling manual and other HIV/AIDS issues  10 Teachers trained in production of local HIV/AIDS materials and translation process

## 2. Highlights

### Training of Anti-AIDS Patrons and District HIV/AIDS Focal Point Persons (EP):

A HIV/AIDS training workshop was held in Katete during 15-19 April for 26 Anti-AIDS patrons (individuals who spearhead Anti-AIDS clubs in schools, most of them teachers) and eight District HIV/AIDS Focal Point Persons, drawn from all seven districts of the province. The workshop was facilitated by six provincial officers, CHANGES staff, and personnel from the Chipata Teacher Training College. The workshop focused on imparting practical skills to the participants, and culminated in the development of a work plan for each school that was represented. Some of the issues presented and discussed in the workshop included HIV/AIDS facts and misconceptions, specific roles for the school/district focal point persons in strategic planning and implementation of HIV/AIDS activities, record keeping and data collection related to HIV/AIDS orphans, counseling skills, stress management in relation to HIV/AIDS, small grants and the operation of Anti-AIDS clubs, and reproductive health issues. Relevant manuals, posters, and brochures were distributed.

### **Training of Head Teachers (EP):**

A workshop was held in Sinda during 29 April–3 May for 30 head teachers from the same schools as the Anti-AIDS patrons (teachers) who attended the Katete workshop (above). The aim of the workshop was to link Anti-AIDS activities with HIV/AIDS plans, and to reinforce activities by developing a committed team. The topics presented and discussed were largely the same as those in the Katete workshop. The participants visited a newly constructed HIV/AIDS resource centre at Chassa Secondary School, which stimulated some good ideas for replicating the centre, or a facility similar to it, in their own schools. The centre at Chassa School is staffed by two prefects and is equipped with TV and video equipment, resource materials, and a teacher from the school. The center serves the surrounding community and is strategically located near a small market and grinding mill to attract people availing themselves of those facilities. The Sinda workshop also included a review of the work plans that were developed by participants in the Katete workshop (above) into which the head teachers provided their input.

### **HIV/AIDS Materials Development and Workshop (EP):**

The Provincial HIV/AIDS Focal Point Person, Mr. C.T. Mbewa, and the Counseling Officer, Mr. Hamwaka, reviewed HIV/AIDS readers and teachers' guides for Grades 3 and 4 that have been produced by a private company in Lusaka and approved by the BESSIP HIV/AIDS component. The readers were reviewed and translated during the local production workshop held in May (see following).

During 15-25 May a HIV/AIDS materials development workshop was held in Sinda, attended by 10 teachers who were selected on the basis of their experience in the areas of art, translation, and media. The 10-day workshop aimed to develop simple HIV/AIDS materials that are culturally appropriate and that can be inexpensively reproduced and used by teachers. The participants first reviewed a number of already available materials including booklets, posters, brochures (see above), and identified informational needs and gaps for pupils in Grades 1-4. Through this process the participants agreed that the format for the materials they produce should be in the format of booklets. The booklets that were developed in the workshop were accompanied by teacher's guides and translated into Chichewa and Tumbuka, the two most common languages in EP. An accomplished artist in the group took on the task of illustrating each of the concepts identified that would be included in the pupil booklets. By the end of the workshop, booklets for Grades 1-3 and teacher's guides were produced and translated. The next step is for the appointed editorial committee in the MOE to revise the materials and arrange for printing them in draft form at UNZA press. After being field-tested, they will be revised and sent to CDC (Curriculum Development Centre) in Lusaka for approval.

### **Training of HIV/AIDS School-Based Counselors (EP):**

During June, 10 school counselors were trained by Mr. Hamwaka and Mr. Mbewa (supported financially and materially by CHANGES) in HIV/AIDS-related issues. The training workshop addressed general issues on HIV/AIDS, introduced a new form for school guidance counselors to use to obtain information on HIV/AIDS from pupils in their schools, and oriented the participants to a newly produced counseling manual that addresses HIV/AIDS.



### **HIV/AIDS Sensitization in Communities Using Popular Theatre (EP):**

The five popular theatre groups that had started sensitization of the 40 schools (20 intervention and 20 control) during the previous reporting period. They completed their work in late May, covering a total of nearly 200 communities. During this phase of their work (the first phase being the general SHN sensitization in the same communities before the October-November 2001 baseline survey), the theatre groups concentrated on HIV/AIDS life skills and behavioral change. They also collected data for community profiles.

A lessons learned/information sharing meeting for the five popular theatre groups was held on 3-4 June, facilitated by Professor Mapopa Mtonga (of UNZA), the EP Coordinator, Mr. K. Hamwaka (Guidance Officer, MOE), and Mr. C.T. Mbewa (HIV/AIDS Focal Point, MOE). The purpose of the two-day meeting was to enable all of the theatre groups who have conducted SHN and HIV/AIDS sensitization activities to come together to share experiences, to learn from each other, and to gain new insights from Professor Mtonga (well-known Theatre for Development expert at UNZA) to improve their work. A list of discussion questions was provided to focus the discussions, including topics such as community entry, data collection methodologies, community involvement, sustainability, problems encountered, and ideas for mass media involvement. Two of the groups provided abbreviated versions of their plays that were reviewed critically by all groups and the facilitators. After the two-day meeting, Professor Mtonga took a preliminary look at the journals and notebooks compiled by the theatre groups and agreed to assist the EP Coordinator in categorizing and analyzing the data.

### **Planning for Operations Research in HIV/AIDS (EP):**

A draft proposal for conducting operations research to investigate the linguistic and cultural appropriateness of HIV/AIDS materials and English language counseling was completed near the end of June by Mr. Hamwaka, Provincial Counseling Officer. The research will be carried out as a collaborative effort between Dr. Brad Strickland of USAID/Washington, Mr. Mbewa, and Mrs. Tolle (both of EP). During June, the EP Coordinator met with Dr. Robert Serpell, currently visiting professor at the University of Malawi, who has extensive experience in psycholinguistics, and who will act as an advisor for the research.

## **D. Small Grants Mechanism (Cross-Cutting Component)**

### **1. Highlights**

#### **Activities in SP:**

During the quarter, the sub-grants officer in SP focused on capacity-building activities with respect to ensuring that the project proposals being received from NGOs and community groups are in line with programme objectives. Many of her activities centered on ensuring that the small grants mechanism is an integral part of the larger CSMC initiative in terms of structures and programme implementation.

A Grants Management Committee (GMC) was formed in Kazungula District, comprised of representatives of the three cooperating line ministries and three local NGOs. Thirteen (13) project proposals were received, and the sub-grant officer verified four of them. All proposal requests received from schools focused on infrastructure inputs whereas proposals submitted from communities mainly included HIV/AIDS activities. The GMC reviewed the four proposals verified by the sub-grants officer and approved one from the Sisters of Francis—a proposal on HIV/AIDS prevention and mitigation. It is encouraging that the small grants component in SP is beginning to move forward at a quicker pace and that the sub-grants officer is having success in improving the quality of proposals and in referring infrastructure requests to other funding sources.

In June, the sub-grants officer participated in the 10-day training of ZCFs from Kalomo District in which she managed a session on the small grants mechanism and effective proposal writing.

### **Activities in EP:**

In EP as well, much activity this quarter focused on capacity-building and improving the quality of project proposals. Of the more than 60 action plans and proposals that have been submitted to date, five have been approved for funding, as follows:

<u>Applicant</u>	<u>Main Activities</u>
Magwero School	Mixed farming and rehabilitation of classrooms
Mnoro Basic School	HIV/AIDS awareness and nutrition center
Cronje Basic School	HIV/AIDS mitigation and cattle rearing
WAPO (Women Against AIDS and Poverty)	Mixed farming and HIV/AIDS mitigation
LWF (Lutheran World Federation)	Mid-level grant for capacity-building activities

Except for the LWF proposal, which will be deferred until more information is in-hand regarding how well rapid response grants are being implemented, the four proposals will be funded in July.

### **III. PROGRAMME ADMINISTRATION**

On the level of programme administration, there were several notable developments during the present reporting period. These are summarized below.

#### **Support of the CSMC Team by Lusaka Office Staff:**

When the CSMC was refocused in March 2002, as described in the previous Quarterly Report, additional support was required from staff in the Lusaka office in order to help get things moving along the intended lines. The Senior Technical Advisor made weekly trips to Livingstone during April-May to help clarify various items in the new strategy and work plan, to assist the CSMC team in planning for implementing the refocused programme, and to strategize regarding staffing patterns and the hiring of new staff. Moreover, because the new strategy of directly funding ZCF

teams introduced new demands and requirements on the programme in terms of financial management, the Senior Finance Manager traveled twice to Livingstone to help the CSMC team put in place financial systems for disbursing, reconciling, and retiring funds from the zonal-level teams. And, finally, the Administrative Assistant attended the training of ZCFs from Kazungula District and documented on computer all the daily activities, proceedings, and deliberations, which were compiled into a training/field manual for the ZCFs.

### **Recruitment of Additional Staff for the CSMC and SHN Components:**

In part due to the refocusing of the CSMC in SP, making some changes in the CSMC team staffing pattern was required, in addition to adding more staff. The positions of Field Coordinator/Training Specialist and Senior Researcher were advertised in the national press and many applications were received for the two positions. A short-list for the former position was made and five candidates were interviewed during 28-29 May. The individual selected has substantial skills in organizing and facilitating workshops, developing training manuals, and has experience working within the government system. One of the Senior Researcher positions was filled on a probationary basis by an UNZA graduate, and he joined the field researchers in Choma District on 22 June. The other Senior Researcher position will be filled in the near future. Also, because the CSMC Administrative Assistant's time will be taken up mostly with financial management, a secretary was hired to assist with routine clerical and office tasks.

In EP, the position of Training Officer was filled by Mr. Benedicto Phiri who has wide-ranging experience in community development in Chipata and Chadiza Districts and experience working in the government and with NGOs. The SHN Administrative Assistant has not yet been hired because of lack of office space due to delays in completing the construction of the EP Coordinator's new office in the provincial MOE. Finally, a third driver was recruited when the additional vehicle (see below) was deployed in Chipata.

### **Purchase of an Additional Vehicle:**

Because it became apparent over time that transport and mobility were ongoing issues in both provincial CHANGES offices, a request was made to USAID to purchase an additional vehicle. The request was approved and the vehicle, a Mitsubishi double-cab, was purchased and deployed in EP, primarily for use by the CARE small grants officer. In turn, CARE International, which is overseeing the small grants mechanism, agreed to deploy their vehicle in SP to be used primarily by their small grants officer in Livingstone. It is anticipated that the addition of this new vehicle in EP and the permanent deployment of CARE's vehicle in SP will go a long way towards alleviating the shortage of transport that has negatively impacted both field offices since the programme's inception.

### **Field Visit by Interim CHANGES Programme Manager from Washington, DC:**

As the CHANGES programme moved into its second year of operations, it was deemed appropriate to have the interim CHANGES programme manager come to Zambia for a monitoring visit. During 16-26 June, Dr. Don Graybill conferred in Lusaka with the Senior Technical Advisor, MOE counterparts, and USAID colleagues to get the lay of the land and to

assist with strategy development and problem-solving as necessary. He also traveled to Livingstone to confer with the SP Coordinator and the CSMC team on progress, achievements, and challenges. Because time was short, instead of Dr. Graybill traveling to EP as originally planned, the EP Coordinator came to Lusaka for two days for meetings during which progress, achievements, and challenges on the SHN side of the programme were discussed. Also during this time, the acceleration and proposed extension of the CHANGES programme were discussed with USAID and MOE counterparts. In the near future, Dr. Frank Dall will take over as the long-term CHANGES programme manager in the home office at Creative Associates International, Inc., in Washington, DC; he will make his first visit to Zambia in that capacity during the next reporting period.

#### **IV. CHALLENGES/LESSONS LEARNED**

Considerable progress was achieved during the present reporting period in the face of several constraints and challenges. These constraints and challenges (and the lessons learned from dealing with them) are briefly summarized below:

- In SP, as described in Section II.A., the CHANGES programme is breaking new ground in the MOE by disbursing funds directly to zonal-level officers—the ZCF teams that are sensitizing and mobilizing communities in each zone of the participating districts. While this represents a novel approach, and an approach that reinforces the MOE’s efforts to decentralize its service delivery system, it also entails considerable risk inasmuch as the programme is pursuing an untried strategy for disbursing and retiring funds at the zonal level, a process that also requires that expenditures are properly receipted and accounted for. The degree of success that will be enjoyed, or of difficulty that will be encountered, in this endeavor remains to be seen.
- A further challenge in SP on the CSMC pertains to monitoring the activities of the ZCF teams on a regular basis at the zonal level. In order for the CSMC to have genuine impact at the grassroots level in communities, the work of the ZCF teams will need to be vigilantly monitored and supported. Yet, given the vast distances involved, the number of ZCF teams working in each district (especially as the programme expands), and the scarce resources available in the government system for field monitoring, this aspect of the work—however important it might be—will be difficult to carry out effectively.
- In EP, fluctuations in school enrolments present challenges to the research side of the SHN programme. Where there has been an influx of pupils (due in part to the free education policy), the quantities of drugs initially calculated are often insufficient to treat all the pupils. At the other end of the enrolment spectrum, low enrolments in schools coming on board the programme make it difficult to meet the target of 10 pupils per grade level (five male and five female), especially at the higher grades, which threatens the consistency of the research.
- In EP, the SHN programme is presently in the midst of a critical period in terms of testing the drug distribution system, something that is vital to the success of the overall programme. While it is still too early to tell for sure, so far it appears the process of

moving the drugs and micronutrients from Lusaka to DHMTs to RHCs and then to schools appears to be working as hoped. Progress on this front will be reported in greater detail next quarter.

## **V. ANTICIPATED ACTIVITIES (JULY – SEPTEMBER 2002)**

During the next reporting period, the following activities will be started, continued, or completed:

### **A. CSMC**

#### July:

- Funds will be disbursed to ZCF teams in Kalomo District, and their community sensitization and mobilization activities will get underway.
- Ongoing monitoring of ZCF team activities in Kazungula and Kalomo Districts will continue.
- New Field Researchers and Senior Researchers will be trained, and existing Field Researchers will be retrained.
- Planning for the ZCF training workshop in Choma District will be completed.
- The “Role Model” booklet will be produced and distributed to all ZCFs and district offices.

#### August:

- Village, school catchment, and district profiles from Choma District will be completed.
- ZCFs from Choma District will be trained.
- An initial stakeholders’ meeting will be held in Livingstone District during which schools and communities will be selected and mapped.
- The Kazungula District ZCF review/refresher training will be conducted.
- Ongoing activities in Kazungula and Kalomo Districts will be monitored.
- The Kazungula and Kalomo District Profiles will be completed.

#### September:

- Village, school catchment, and district profiles for Livingstone will be completed.

- Livingstone ZCFs will be trained.
- The Kalomo District ZCF review/refresher training will be conducted.
- Two new districts (the fifth and sixth to participate in the CSMC) will be selected, and the initial stakeholders' meetings will be held during which schools and communities will be selected and mapping will be completed.
- Research and verification will be started in the two new districts.
- Choma District activities will be monitored.

IEC Activities During Next Quarter:

- The role model booklet "Making a Difference" will be completed and disseminated.
- The Kazungula and Kalomo District Profiles will be produced and disseminated.
- A CSMC programme brochure will be produced and distributed.
- Work will be started on a CSMC documentary video.
- Work will be started on the production and transmission of CSMC radio programmes.

**B. SHN**

- Mass treatment of all pupils in the remaining 9 (of 20) intervention schools will be completed.
- Teachers and health center staff from the 20 new intervention schools will be trained, and nine additional CAI test administrators will be trained in preparation for the Phase II survey.
- All logistical preparations for the Phase II survey will be completed, including finalizing field teams, borrowing vehicles from various MOE departments and offices, purchasing juice and biscuits for pupils who will be taking deworming drugs, etc.
- Collection of height and weight measures will be completed in the new 20 control schools.
- The Phase II (follow-up) survey will be started and nearly completed in September.
- CHANGES will assist in the facilitation of training teachers in the 40 additional schools from Mambwe and Lundazi Districts as part of the SHN scale-up.

- The drug distribution procedure will be followed-up to ensure drugs are reaching RHCs and that teachers are properly using the required forms and are calculating and dispensing drugs accurately to pupils.
- The development of SHN demonstration schools will be continued.
- The following IEC inputs will be completed:
  - production of SHN advertisements for radio and television
  - publication of the second issue of the SHN News magazine
  - design, typesetting, and editing of the SHN calendar for 2003-2004
  - production of a booklet on SHN guidelines
  - production of the third SHN brochure

### **C. HIV/AIDS**

- In SP, zonal-level facilitators in Kazungula and Kalomo Districts will continue to sensitize and mobilize communities regarding HIV/AIDS, in addition to girls' education. Community action plans developed in those districts will include HIV/AIDS activities.
- In SP, field researchers will complete research and verification activities in Choma District and in Livingstone District with a focus on HIV/AIDS.
- In EP, a review of HIV/AIDS activities in schools in five districts (the "situational analysis" referred to in the last Quarterly Report that was not completed this reporting period) will be conducted.
- The booklets developed in the Sinda HIV/AIDS workshop this quarter will be completed (EP).
- In EP, the proposed HIV/AIDS operations research (see above in SHN section, Part II.) will be conducted by Dr. Brad Strickland, Mr. Mbewa, Mr. Hamwaka, and Mrs. Thole on cultural and linguistic aspects of HIV/AIDS and implications for counseling.
- The delayed HIV/AIDS life skills training course for EP (Module 2) will be planned and delivered.

### **D. SMALL GRANTS MECHANISM**

- In EP, community visits and meetings in Chadiza, Chipata, and Chama Districts will continue.
- In EP, the four rapid response grant proposals that have been approved will be funded and implemented in July.

- In SP, a GMC will be formed in Kalomo District, and the work of the Kazungula GMC will continue; at least two or three grants will be made during the next quarter.

\* \* \*



## **Appendix A**

### **CHANGES Programme Description and Deliverables**

**The CHANGES Programme**  
(Communities Supporting Health, HIV/AIDS, Nutrition, Gender, and  
Equity Education in Schools)

## INTRODUCTION

The contract between USAID/Zambia (United States Agency for International Development) and Creative Associates International, Inc. (CAII) to implement the CHANGES programme was officially signed on 1 April 2001. Funded for an initial period of three years, the CHANGES programme provides technical assistance to Zambia's Ministry of Education under the auspices of the Basic Education Sub-Sector Investment Programme (BESSIP). The overall aim of the CHANGES programme is to improve basic education in Zambia through the provision of technical support to three of BESSIP's nine components: Equity and Gender, HIV/AIDS, and School Health and Nutrition (SHN).

At the same time, the CHANGES programme aims to support USAID's Strategic Objective #2: *Improved quality of basic education for more school-aged children* through addressing two Intermediate Results: *Improved quality of learning environment in targeted areas* (IR 2.1) and *Improved delivery of school-based health and nutrition interventions to support pupil learning* (IR 2.2). Cutting across these Intermediate Results are strategies to mitigate the negative effects of HIV/AIDS on the quality, access, and sustainability of good basic education and, as such, HIV/AIDS is a cross-cutting theme of the CHANGES programme as well. Another cross-cutting dimension or strategy of the CHANGES programme is a sub-grant mechanism, implemented in collaboration with CARE USA, that aims to provide modest grants and seed money for projects and initiatives proposed by schools, PTAs, community groups, and local organizations in the areas of school health and nutrition, the promotion of basic education for girls and other vulnerable children, and the mitigation of the impact of HIV/AIDS on Zambian communities and its school system.

## OBJECTIVES/STRATEGY

During the initial three-year period, the CHANGES programme will be operational in Southern and Eastern Provinces, with its headquarters in Lusaka. In Southern Province (hereafter, SP) the focus of the CHANGES programme is the Community Sensitization and Mobilization Campaign (CSMC). Initiatives in this component include the use of popular theatre to facilitate community participation to surface issues related to increasing girls' and other vulnerable children's attendance and retention in primary school; the development and implementation of district- and community-level action plans to address issues raised through popular theatre and participatory action research; the training of provincial and district government officials in community participation methodologies related to gender equity; and training teachers to integrate life skills throughout the curriculum.

Simultaneously, in Eastern Province (hereafter, EP) the central thrust is on school health and nutrition (SHN) interventions, including conducting baseline biomedical, anthropometric, and cognitive surveys; providing micronutrients and deworming pills to primary students, administered by teachers; training teachers in school health, nutrition, and life skills; sensitizing

and mobilizing communities through popular theatre, district field teams, and public gatherings; and strengthening linkages between health centers and schools.

Although the CSMC and SHN components are being initially piloted in SP and EP respectively, it is anticipated that, over time, considerable cross-fertilization between the inputs being made in each province will take place. Further, inasmuch as addressing HIV/AIDS and providing small grants cut across the two major component areas described previously, inputs in these two areas will be made in both SP and EP.

The major tasks to be completed in the CSMC (IR 2.1) and SHN (IR 2.2) components during the initial three-year programme period are the following:

*Community Sensitization and Mobilization Campaign (IR 2.1: Improved quality of learning environment in targeted areas)*

- Sensitize, motivate, and mobilize parents, local leaders, teachers, pupils, and PTAs from five school catchment areas in each of nine districts in Southern Province (total: 45) to increase girls' and other vulnerable children's enrolment and retention in primary school and to halt the proliferation of HIV/AIDS.
- Strengthen the capacity of district-level officials from the Ministries of Education (MOE), Health (MOH), and Community Development and Social Services (MCDSS) to work cooperatively and collaboratively, and to facilitate a successful mobilization campaign.
- More specifically, the preceding two tasks have the following scope:
  - At least nine of the eleven districts in Southern Province will be actively involved in the CSMC.
  - Forty-five schools (five per district) and approximately 270 villages will be involved in action research and verification activities.
  - Approximately 225 district officials (25 per district) from the MOE, MOH, and MCDSS will be trained in community participation methodologies and mobilization strategies in order to effectively take on the role of Field Worker in their districts.
  - One hundred and eighty community leaders and those active in development in their communities will be trained as "Community Animators" to lead the CSMC work in their communities.
  - Approximately 90 district-level plans of action will be developed as a framework for community sensitization and mobilization.
  - Community-level plans of action will be developed and implemented in the 45 school catchment areas in the initial nine districts in Southern Province.
  - Action plans that address HIV/AIDS will be developed and implemented in those same 45 primary school catchment areas.
  - A variety of activities that support the above initiatives will be designed and put in place.

*School Health and Nutrition (IR 2.2: Improved delivery of school-based health and nutrition interventions to support pupil learning)*

- Provide an overview of current SHN and community-based activities in Eastern Province.
- Develop strategic alliances at the provincial- and district-levels among MOE, MOH, and MCDSS, and assist in developing the capacities of the alliance partners.
- Train teacher trainers and community development trainers in SHN and establish a system within the BESSIP framework to train teachers and community workers as the programme expands.
- Train district- and community-level field workers and teachers in pilot areas.
- Develop information, education, and communication (IEC) materials to promote good health, nutrition, and hygiene, especially for school-age children, their families, and their communities.
- Establish and implement protocols for anthropometrics and other pupil health and nutrition status monitoring procedures in schools.
- Develop a School Health Card that tracks health and nutrition-related issues as well as the learning of pupils as they progress through school.
- Develop and implement a Cognitive Assessment Instrument.
- Implement pilot testing of the SHN program, including provision of micronutrients and deworming medicine, monitoring pupil health status, community sensitization, training health workers and teachers, and strengthening health and life skills education in schools.
- Develop a SHN program information system to monitor progress and impact at all levels.
- Establish a drug distribution and storage system.
- Mobilize communities to support SHN activities.
- Develop and implement a plan with the MOE to mitigate the effects of HIV/AIDS on basic education, integrated within and/or complementing the SHN programme activities, including the development and implementation of action plans that address HIV/AIDS in 80 primary school catchment areas.

## **Appendix B**

### **CRECCOM (Malawi) Consultants' Report**

REPORT ON THE TRAINING CONSULTANCY CONDUCTED

BY

CREATIVE CENTRE FOR COMMUNITY MOBILIZATION  
(CRECCOM)  
ZOMBA, MALAWI

FOR THE CHANGES CSMC PROGRAMME IN ZAMBIA

(April 20, 2002 – May 19, 2002)

**Prepared by: Earnest Pemba  
Zikani Kaunda**



### **Abbreviations**

**CBD** – Community Based Distributors

**CDA** – Community Development Assistant

**CSMC** – Community Sensitization and Motivation Campaign

**DCDO** – District Community Development Officer

**DEO** - District Education Officer

**DIP** – District Inset Providers

**DIS** – District Inspector of Schools

**EHT** – Environmental Health Technician

**PIP** – Provincial Inset Providers

**PIS** – Provincial Inspector of Schools

**PTA**- Parents Teachers Association

**SIS**-Senior Inspector of Schools

**TBA** – Traditional Birth attendants

**ZCH** – Zonal Center Head

**ZIP** – Zonal Inset Provider

## ACKNOWLEDGEMENT

We wish to thank Management and Staff of CHANGES Lusaka, CHANGES CSMC Livingstone; Southern Province Offices, Ministry of Education; Ministry of Community Development and Social Services; and DHMT, Ministry of Health; the Kazungula District Education Office; District Community Service Office; and District Health Office; and the entire Kazungula CHANGES CSMC Zonal-Level Community Facilitators for their time and contribution towards this Training Consultancy, they created a conducive and memorable environment.

Special mention should go to Dr Edward Graybill, Senior Technical Advisor CHANGES; Dr Madhuri Kilpatrick, Southern Province CHANGES Coordinator and her staff; Ms Isabel Nanja, Provincial Inspector of Schools; Ms Cecilia Sakala, Senior Inspector of Schools (Science) for their technical and moral support during the Training Consultancy.

Last but not least, we would also like to thank Creative Associates International Inc and USAID for the Technical and Financial Support towards this Training Consultancy.

**We hope that the relationship between Creative Center for Community Mobilization (CRECCOM) and CHANGES/ Livingstone will continue and even grow further.**



## 1.0 INTRODUCTION

This report is going to cover the consultancy Creative Center For Community Mobilization (CRECCOM) undertook in assisting the CHANGES Community Sensitization Mobilization Campaign (CSMC) Programme in the Southern Province in Zambia from April 20, to May 19 2002. Even though there were a number of tasks to be accomplished, but the main focus has been on the training of the Zonal-level Community Facilitators who came from Kazungula district.

## 2.0 Assignment Overview

### The Objectives

- 2.1 To determine the training needs of the identified Zonal-Level Community Facilitators and thereafter develop a plan for a 10-day training workshop for them and their direct supervisors from the District and Provincial offices.
- 2.2 To establish the knowledge, expertise and experiences the CHANGES CSMC team has which will assist in the facilitation of the training of trainers' session.
- 2.3 Together with the CHANGES CSMC team, facilitate the Kazungula district training of Zonal-level Community Facilitators and their direct supervisors from the District and provincial offices.
- 2.4 To evaluate the training of Zonal-level Community Facilitators and develop strategies of perfecting the training sessions and facilitation skills.
- 2.5 To share with the CHANGES CSMC team the experiences and challenges they would likely meet when expanding the program countrywide while utilizing a similar community mobilization strategy.

## 3.0 Focus

### Task

- 3.1 Collect information on the identified key programme personnel i.e. Zonal-level Community Facilitators, CHANGES CSMC team, District and Provincial officers on:
  - Training experiences
  - Knowledge they have on the Community, Sensitization, Motivation and Mobilization methodologies
  - Methods used by CSMC team in training Community Mobilizers
  - Training materials already available
  - Key target groups at grass root level

- 3.2 Analyze the information available in line with the Goals and Objectives of the CHANGES programme.
- 3.3 Jointly (CSMC and Training Consultants) draw-up the content and schedule for a 10-day training workshop.
- 3.4 Facilitate a training of trainers' session in order to effectively deliver the subject matter content during a 10-day Zonal-level Community Facilitators workshop.
- 3.5 Share topics amongst trainers
- 3.6 Lead facilitation during the 10-day Zonal-level Community Facilitators workshop
- 3.7 Develop a feedback strategy in order to determine as systematically and objectively as possible the relevance, effectiveness and impact of the training in the light of the CSMC programme.
- 3.8 Draw-up some of the experiences, lessons learnt and challenges from the implementation of a similar community mobilization strategy that is being implemented on a larger scale i.e. countrywide, the Malawi experience.
- 3.9 Prepare a report that would highlight main findings from the interactions and discussions with CSMC team, Zonal-level Community Facilitators, Provincial and District officers, which will determine the training needs of the identified Zonal-level Community Facilitators. Also included in the report are recommendations and the way forward.

#### 4.0 **Methodology**

- 4.1 Interviews and discussions with key staff
- 4.2 Other participatory training methods (what CRECCOM utilizes e.g. Focus Group Discussions, Role Models etc. plus what CSMC utilizes)
- 4.3 Observations
- 4.4 Daily and end of workshop evaluations.

#### 5.0 **Activity report**

This consultancy took place from 20<sup>th</sup> April to 19<sup>th</sup> May 2002. There were a number of activities that were carried out each day. For full report see the details below:

<b><u>Date</u></b>	<b><u>Day</u></b>	<b><u>Activity</u></b>
20/04/2002	I	Preparations in Zomba – Malawi.
21/04/2002	II	Arrival in Livingstone.

22/04/2002	III	Introductions with CSMC staff and the Ministry of Education officials. Discussions with CSMC team on their experiences and expertise in training.
23/04/2002	IV	Discussions with CSMC members of staff and the targeted Zonal-level Community Facilitators from Mukuni Zone (CDA/EHT).
24/04/2002	V	Planning meeting with the three line Ministries:–Education, Health and Community Development at Hill Crest Provincial Resource Center in Livingstone.
25/04/2002	VI	Establishing content and schedule of the training workshop for the Zonal-level Community Facilitators.
26/04/2002	VII	Developing the training materials.
27/04/2002	VIII	Briefing the “would be” Trainers on the developed training materials and sharing topics.
28/04/2002	IX	Developing training materials and sharing how each topic could be tackled.
29/04 – 10/05/2002	X – XXI	Training for Kazungula district Zonal-level Community Facilitators at Rainbow Africa, Livingstone. Field Focus Group Discussion practical at Musokotwane School.
11 – 12/05/2002	XXII - XXIII	Analyzing workshop proceedings.
13/05/2002	XXIV	Reviewing the Zonal-level Community Facilitators’ workshop with CSMC staff and drafting the report.
14/05/2002	XXV	Discussions with the Ministry officials on how the workshop went and report writing.
15/05/2002	XXVI	Report writing.
16/05/2002	XXVII	Reviewing of the report by CSMC staff.
17/05/2002	XXVIII	Making corrections to the report and traveling to Lusaka. Briefing meeting with CHANGES Staff in Lusaka

18 – 19/05/2002

XXIX -  
XXX

Enroute to Malawi

## **6.0 THE MAIN FINDINGS FROM THE INITIAL INTERVIEWS AND DIALOGUE**

When discussions were made with the CHANGES CSMC team, the Provincial and District-level officials from the three line ministries – Education, Health and Community Development and Social Services to determine the training needs of the Zonal-level Facilitators, the following was established:

### **(a) CHANGES CSMC team members**

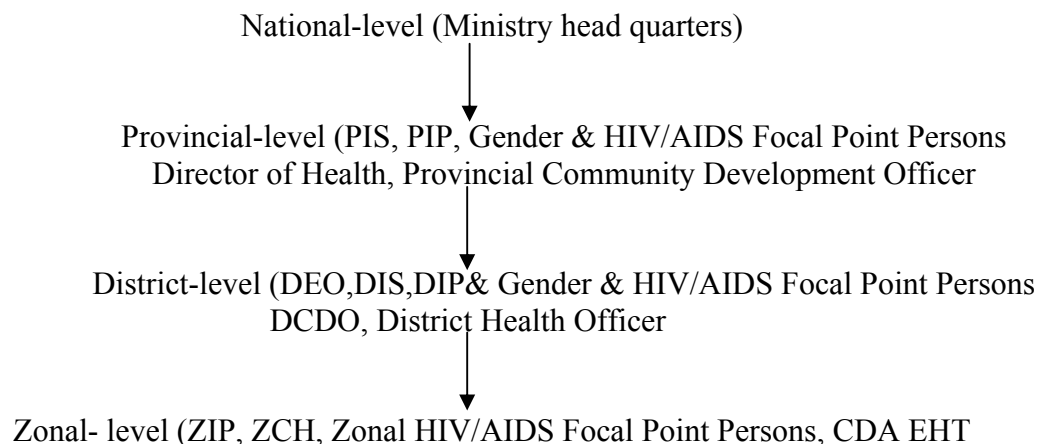
They had previously conducted a 5-day residential training workshop for community mobilizers in Kazungula and Kalomo districts in collaboration with other Ministry officials i.e. Education and Health. The main topics that they had tackled in the training session included:

- Expectations of participants
- Goals and Objectives of CHANGES CSMC Program
- Gender and Equity
- Research Findings
- Community Participation
- The Rights of a child
- HIV/AIDS
- Resource Management and Sub-Grants
- Community Action Plans

In each district, the community mobilizers came from 5 schools catchment areas. The group comprised of Head teachers, PTA Chairperson, Health workers and other self motivated and energetic persons. These mobilisers were responsible for sensitizing and mobilizing communities to take action to promote girl child and other vulnerable children's education and to prevent the spread of HIV/AIDS. They were to facilitate discussion amongst community members and assist them come up with plans of action. Some of their activities would be funded through the sub-grants. The participants were not given hand out notes and each trainer had his or her training materials, which, unfortunately, were not compiled together.

**(b)The Provincial and District-level officials**

All the three line ministries have the following structure (even though concentration will be on the last 3 levels):



**7.0 WORK EXPERIENCE AND WORKING AREA OF THE ABOVE MENTIONED MEMBERS OF STAFF**

**- Provincial and District-level**

It cannot be disputed that the members of staff in the three line ministries have quite a vast experience in training. They have conducted some training in one field or another. Some have even done so many trainings in HIV/AIDS, Gender issues and Community Development. In one way or another these provincial and district officials have themselves been trained in HIV/AIDS, Gender issues and Community Development. They know the governments' policies and the subject matter very well. They have reached out to communities using different ways but mostly through meetings and workshops. What is missing, is putting together of different strategies to run a Community Sensitization and Mobilization Campaign on a fully-fledged scale which involved different target groups at community and Zonal level and lack of follow-up after the initial training has been given. Their field visits for support/supervision is limited due to various logistical problems. The working area of these staff members is either the whole Province or district, which ever is applicable.

**- Zonal or Center-level**

The members of staff on this level have some knowledge of HIV/AIDS, very limited knowledge on Gender issues and Community Mobilization. The Community Development Assistants and Environmental Health Technicians by the virtue of their job descriptions do reach out to some communities unlike the Zonal Center Heads, Zonal HIV/AIDS Focal Point Persons, and Inset Providers who are full time teachers and are Zonal confined to schools. However, some of the CDAs, and EHTs, had conducted some training for the community members while the Zonal Heads, Zonal

HIV Focal Point Persons and Zonal Inset Providers had conducted some training for fellow teachers.

The work area for the Zonal Heads, Zonal Inset Providers, and Zonal HIV/AIDS Focal Point Persons is the schools within the zone and may manage to go out from their schools to train their fellow teachers three times in a term (This is especially true for the Zonal Inset Providers). As for the Community Development Assistants and Environmental Health Technicians, they cover a very wide area. Their working area radius ranges from 6 to 18 kilometers and at times it can even go up to 25 kilometers. One of the critical stumbling blocks for these people is lack of any means of transportation (bikes, motorbikes, vehicles) to carry out their work.

Even though the above listed Zonal-level members of staff seemed to be the ideal ones, the Director of Health during a planning meeting at Hill Crest, argued that the EHTs are very busy people and that the Clinical Officers and Nurses do also go out to meet the communities. This is yet to be proved. The Ministry of Education also stated that the ZIPs are also very busy hence selected the HIV/AIDS Focal Point Persons and other mere teachers. This again might have some negative implications that are yet to be proved. From our discussions with these Clinical Officers and Nurses it was found out that they are confined to the Rural Health Centers and as such may not be ideal for an intensive community mobilization campaign.

One notable feature about the Zonal-level people is that they all except for the CDAs have had no training on community mobilization per-se.

Looking at the above information, it was imperative to conduct training on how to carry out a Community Sensitization and Mobilization Campaign utilizing strategies that would allow the campaign to scale up to every community within a short period. There was need to go through this Zonal-level facilitation together with CHANGES CSMC staff as the training aimed at coming up with a cadre of well skilled grassroots Zonal-level Community Facilitators who in turn were going to train various target groups.

## **8.0 RESEARCH FINDINGS**

From the research findings and the discussions that were held with various Ministry officials, it was established that the following target groups should be included in the community-based training, if the campaign was to make a greater impact:

- Community and Influential Leaders
- Teachers
- PTAs
- Community Health Workers
- Peer Outreach Workers
- TBAs
- Neighborhood Health Committees

CBDs  
Traditional Healers  
Initiation Counselors

## **9.0 TRAINING OF TRAINERS**

This was done in a very modified way as opposed to the original plan of having two or two and a half days training sessions for trainers because:

1. Lack of time by some of the CHANGES staff members and the other possible trainers that would have been incorporated in the program due to funerals.
2. Lack of specific “ would be trainers” list. It was not known as to who actually was going to be the core trainers in the next up-coming workshops.

A list of possible topics was drawn (**see attachment 1**) after considering what the Kazungula and Kalomo Community Mobilizers were trained on and analyzing the information that was gathered on the Zonal-level Facilitators’ qualification, work experience and knowledge on sensitizing, motivating and mobilizing communities. This list of topics was presented to CHANGES CSMC staff and two Ministry of Education officials – The Provincial Inspector of Schools and the Senior Inspector of Schools who are also the Gender Focal Point and HIV/AIDS Focal Point persons, respectively, for their input. After the discussion, a ten-day time table (**see attachment 2**) was drawn which took care of all the subject matter that was to be delivered to the trainees. The topics were then distributed amongst the trainers who were asked to come up with a methodology they would use in presenting their sessions during the 10-day Zonal-level Community Facilitators workshop. A half-day briefing session was held to share how each was going to deliver a particular topic. However, three members from the three line ministries – Education, Health and Community Development and one external facilitator were not present during this briefing session.

Due to lack of training materials (hand-outs) most of our time was spent in developing these. These handouts could easily be developed into a training manual and the next Zonal-level Community Facilitators training should be easier to conduct. {see the bound volume of handouts}

## **10.0 THE ACTUAL TRAINING PROCESS OF KAZUNGULA ZONAL-LEVEL COMMUNITY FACILITATORS TRAINING**

### **10.1. TYPE AND TIME OF THE WORKSHOP**

The workshop for Kazungula Zonal-level Community Facilitators took place at Rainbow Africa in Livingstone from Monday 29<sup>th</sup> April to Thursday 9<sup>th</sup> May, 2002. The participants arrived on 28<sup>th</sup> April, 2002 and left for home on 10<sup>th</sup> May, 2002. It was a residential type of workshop, where the participants’ accommodation, food (Breakfast, Lunch and Supper) were paid for. They were

also given ZK 40,000.00 per day as an out of pocket allowance. Transport was refunded to the participants upon production of a valid tickets, receipts etc.

## 10.2. **WORKSHOP AIMS**

Kazungula Zonal-level Community Facilitators training had two major aims:

- To come up with a model Zonal-level Community Facilitators training before tackling the other districts, and also to come up with the best training topics, facilitators from – CHANGES CSMC, MINISTRY & OTHER ORGANISATIONS.
- To train Zonal-level Community Facilitators for Kazungula district who were to immediately implement the Sensitization, Motivation, and Mobilization programme in their areas.

## 10.3 **WORKSHOP PARTICIPANTS AND FACILITATORS**

### **(a) PARTICIPANTS**

Participants came from the 3 line Ministries of Education, Health and Community Development.

- From Education came class teachers, and some of these were HIV/AIDS Focal Point persons. It was planned that 10 teachers should come from the 10 Education zone in Kazungula, one from each zone. Only 9, 5 females and 4 males turned up because the message did not reach the other remaining teacher. It is planned that the remaining teacher will be trained in Kalomo district.
- From Health came 7 Medical Personnel – 4 males and 3 females, (3 Senior Clinical Officers, 1 Clinical Officer, and 3 Nurses) from the 10 Rural Health Centers. 5 of the seven were from one rural health center. This led to a big shortage of health personnel to cover Educational zones.
- From Community Development, 6 Community Development Assistants came from 4 centers out of the existing 10 centers.
- There were 5 Education Provincial officers, 1 Community Development Provincial Officer and 1 Community Development officer, 1 Education Officer and 1 Health Officer from the district offices.

For more details *see attachment 3*



### **(b.) FACILITATORS**

- There were two consultants, who were lead facilitators, from CRECCOM Malawi –Zikani Kaunda and Earnest Pemba
- from CHANGES – CSMC office, 2 Provincial Officers – Ms Isabel Nanja the PIS and Mrs. Cecilia Sakala the SIS, and Mr. Christopher Siyamwenya Focal Point person for Community Schools, 1 District Health officer - Mrs. Lena Tembo and 1 District Community Development Officer – Mrs Precious Chembo.
- 1 External facilitator from SEPO Drop In Center - Mr. Akakulubelwa.

### **(c) GUEST OF HONOUR**

The workshop was officially opened by the Deputy Provincial Education Officer Mr.S.H. Mweemba.

### **(d) MINISTRY HEADQUARTERS OFFICERS**

Mrs. Esther Sinkala the Principal Inspector of Schools, who is also the Gender and Equity Coordinator/Focal Point Person and Ms. Ireen Malambo the Senior Inspector of Schools, who is the HIV/AIDS Coordinator from Ministry of Education Headquarters Lusaka graced the workshop with their presence on Tuesday 7<sup>th</sup> May 2002.

### **(e) CHANGES- LUSAKA**

The Administrative Officer Mrs. Mirriam Libingi from CHANGES – Lusaka attended the workshop throughout. She assisted in the typing of the presentations, deliberations and discussions, which will help in the production of a training manual.

The Senior Finance Manager – Mr. Chansa Katongo joined the workshop on Tuesday 7<sup>th</sup> May 2002 and stayed up to 10<sup>th</sup> May 2002.

The Senior Advisor of CHANGES – Lusaka, Dr. Edward Graybill graced the occasion on 8<sup>th</sup> and 9<sup>th</sup> May 2002. He assisted in sorting the stalemate on how much money is at stake for zonal facilitated activities, which delayed and stalled the planning, and budgeting as the participants repeated the calculations because of too many changes in the figures. He also officially closed the 2 weeks training workshop.

## **10.4 TRAINING TOPICS**

There were many topics for the 10 days Zonal Level Facilitators Workshop. For detailed outline of topics refer to a 10-day timetable attached.

These topics could be classified into 5 categories. The classification is based upon the impact these topics would have on the Zonal-level Community Facilitators. It was hoped that at the end of the workshop, the Zonal-level Community Facilitators would have been equipped with:

- a) **Information / Sensitization / Awareness**
- b) **Methodology, Approach, Mechanisms**  
These promote Sensitization, Motivation and Mobilization of target communities so that they are involved in participation and contributions.
- c) **Administration of CHANGES Activities, funds etc.**
- d) **Practical** – A feel of working with the community using the learnt methodology.
- e) **Sustainability**, continuity after project period.

**10.4 (a) TOPICS THAT WOULD PROVIDE INFORMATION SENSITIZATION AND AWARENESS**

<i><b>TOPIC</b></i>	<i><b>FACILITATORS</b></i>
1. Objectives of the Workshop	- <b>Zikani Kaunda</b>
2. CHANGES-CSMS Goals and Objectives	- <b>Dr. M. Kilpatrick</b>
3. Action Research Findings	- <b>Mazuba Mutinta</b>
4. Gender and Equity	- <b>Isabel Nanja</b>
	- <b>Dr. M. Kilpatrick</b>
5. HIV/AIDS	- <b>Mrs. Cecilia Sakala</b>
	- <b>Mr. kakulubelwa- SEPO</b>
	- <b>Mrs. Lena Tembo</b>

**10.4(b) TOPICS THAT PROVIDE METHODOLOGY, APPROACH, STRATEGIES FOR COMMUNITY SENSITIZATION, MOTIVATION AND MOBILIZATION**

<b>TOPICS</b>	<b>FACILITATOR</b>
1. Strategies for Sensitizing, Mobilizing- Focus Group Discussion	- <b>Zikani Kaunda</b> - <b>Zikani Kaunda</b> - <b>Zikani Kaunda</b>
2. Role Model,	- <b>Zikani Kaunda</b>
3. Meetings	- <b>Earnest Pemba</b>
4. Selection and Utilization of	- <b>Zikani Kaunda</b>

<b>TOPICS</b>	<b>FACILITATOR</b>
Peer Outreach Workers	- Earnest Pemba
5. Community Based Workshops	- Earnest Pemba
6. The Winning Facilitator	- Dr. M. Kilpatrick
7. Adult Learners	- C. Siyamwenya
8. Community Participation	- Rose Chibbonta
9. Community Action Plan	- Zikani Kaunda
10. Resource Mobilization	- Rose Chibbonta
11. Information Dissemination	- Zikani Kaunda
12. Mass Communication	- Zikani Kaunda

#### **10.4(c) TOPICS ON PLANNING AND ADMINISTRATION OF PROGRAM ACTIVITIES AND FUNDS**

<b>TOPICS</b>	<b>FACILITATORS</b>
1. Monitoring and Evaluation	- Earnest Pemba
2. Tracking Down Indicators of Outreach and Impact.	- Earnest Pemba - Rose Chibbonta
3. CHANGES Sub-Grants	- Zikani Kaunda
4. Report Writing	- Zikani Kaunda
5. Planning-Where, Who, How, When.	- Earnest Pemba - Zikani Kaunda
8. Plan of Action-Elements and Activities	- Earnest Pemba - Earnest Pemba
9. Mapping of Zones	- Earnest Pemba
10. Budgeting Theory	- Rose Chibbonta
11. Tips on How to Expend CHANGES Funds	- Mazuba Mutinta - Ackim Mambo
12. Reconciliation Theory	- Dr. M. Kilpatrick
13. Planning and Budgeting	- Zikani Kaunda - Earnest Pemba

#### **10.4(d) TOPICS THAT PROVIDED PRACTICAL ASPECTS**

##### ***TOPICS***

1. Focus Group Discussion  
Musokotwane School
2. Focus Group Discussion  
Review.

##### ***FACILITATOR***

- **Zikani Kaunda and  
chosen Participants**
- **Ackim Mambo**

#### **10.4(e) TOPICS HAVING SUSTAINABILITY ELEMENTS IN THEM**

- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| 1. Role of Various Line Ministries.   | - <b>Ackim Mambo</b>                |
| 2. The Winning Facilitator            | - <b>Earnest Pemba</b>              |
| 3. All those topics found in 10.4 (b) | - <b>All Facilitators concerned</b> |

#### **10.5 OUT PUT OF EACH TOPIC IN THE ZONAL LEVEL FACILITATORS WORKSHOP**

##### ***10.51 House Keeping***

- National Anthem
- Prayer
- Introductions
- Opening speech
- Committees \* Welfare
- Steering (elected daily)
- Workshop NORMS – Ground Rules.
- Workshop Expectations, Fears, Concerns

##### ***10.52. Workshop Objectives And Process***

- What is to be achieved after each topic, by the end of each day and workshop?
- Compare expectations with the set up objectives.
- The objectives are to answer most of the participants' expectations and if not, the unanswered expectations should be responded to.
- Going through the timetable.

### **10.53. Programme Goals and Objectives**

- Defining CHANGES, CSMC – Donor, Implementers
- Government of Zambia program.
- Area of coverage
- Components of CHANGES CSMC, a brief summary – Research and Verification, Zonal Levels Facilitators Training, Community Based Sensitization, and Community Based Initiates
- Campaign Goals
- Activities to date
- Way forward
- Which Districts are going to be targeted next

### **10.54. Role of various ministries**

- Group work where the Participants from the three Ministries are mixed, but they should come up with roles of the three different line ministries in this campaign (Education Health and Community Development).
- The District and Provincial team to come up with what they expect would be the role of their staff in the campaign.
- The commitment of District, Provincial and Ministry Headquarters officials on the involvement of government members of staff in the program. This Commitment is in the form of human resource contribution that comprises of: Zonal-level Community Facilitators, District, Provincial Teams and Ministry officials.

### **10.55 ACTION RESEARCH**

- What is Action Research
- Selection of researchers, Who chooses the researchers
- What is their training like  
Who selects the area where the research is to be conducted, how do they research, what next after research
- Research profiles, how are they disseminated and why

### **10.56 GENDERS AND EQUITY**

- Ministry of Education, Health, Community Development point of view.
- Policies on Gender from each Line Ministry.
- Principal objectives of Equity and Gender component.
- Gender in Education.
- Strategies.
- PAGE interventions.

#### **• Gender**

- Definitions
- Gender activities and group works
- Gender biases in schools

- **Equity**
- What is equity
- How can it be achieved

#### **10.57 HIV/AIDS EPIDEMIC**

- Group Work
  - What is HIV/AIDS?
  - What causes HIV/AIDS?
  - Effects of HIV/AIDS in society
  - Methods of transmission
  - What are preventative methods?
- **HIV/AIDS SITUATION - PRESENTATION**
  - Global view
  - Regional, local situation
  - HIV transmission mechanisms
  - HIV/AIDS pyramid
  - Age, sex distribution of HIV/AIDS in Zambia.
  - Discuss impact of HIV/AIDS
- **EDUCATION POLICY ON HIV/AIDS**
  - Strategies in Education.

#### **10.58 TECHNIQUES AND STRATEGIES FOR SENSITIZING MOTIVATING AND MOBILIZING COMMUNITIES TOWARDS PARTICIPATION AND CONTRIBUTIONS.**

- Group work on campaign strategies they know
- **METHODS OF CAMPAIGN STRATEGY**
  - Person to person
  - Mass Media
  - Examples of each of the two above.
  - How the two above Complement each other.
- **Focus Group Discussions**
  - What is a Focus Group Discussion (FGD)?
  - Why Focus Group Discussions are important?
  - How FGDS can be conducted
  - Role of a Facilitator in an FGD
  - Basic information needed before conducting an FGD
  - How to plan for an FGD?

#### **10.59 FOCUS GROUP DISCUSSION – PRACTICALS**

- Comes after FGD Theory
- Choose 4-6 participants to lead in a practical FGD during the workshop.
- Site is chosen on the first day of the workshop, and the school and community are informed the same day. This is to be arranged by the Zonal-Level Community Facilitators of the area concerned.
- Transport to be arranged in advance.
- Clothing must suit the community setting.
- No books and files are carried to the field practical.
- The rest observe and assist in facilitation during group work.

#### **10.60 REVIEW OF FGD PRACTICAL**

- Review, and critic how the FGD was conducted.
- Start with one role, and then go to the other looking at what went on well and where there is need to improve.

#### **10.61 PEER OUTREACH WORKERS (POW)**

- Define key words – PEER, OUTREACH
- Why Peer
- Who are POWs
- Selection of POWs
- Some qualities of a good POW, Solicit from group then summarize.

#### **10.62 ROLE MODEL INITIATIVE**

- What / who is a Role Model?
- Types of Role Models
- Examples of Role Models
- Role Model identification
- Qualities of Role Models
- Utilization of Role Models
- Incentives to Role Models

#### **10.63 REPORT WRITING AND INFORMATION DISSEMINATION**

- What is information Dissemination?
- What is reporting?
- Why report, share information?
- Steps to be followed when reporting or disseminating information.
- How to share information
- Reporting format.

#### **10.64 RESOURCE MOBILIZATION**

- Group work
- What are resources
- Types of resources

- Classification of resources
- External resources

Examples of possible donors and their requirements.

Present what Resource Mobilization is, Give examples of resources and how they can be mobilized

#### 10.65 **COMMUNITY ACTION PLAN**

- Definition of an Action Plan.
- Things to consider when drawing a Community Action Plan.
- Elements of a Community Action Plan:  
Constraint /Problem, Objective, Time Frame, Resources/Internal and External, Evaluation / Remarks.

#### 10.66 **COMMUNITY PARTICIPATION**

- Role Play  
*Discussions of the Role Play*
- Relevance of role-play to facilitators work.
- What facilitators of the role-play could have done differently?
- What is the expected outcome of the next meeting after the one on the role-play?
- Presentations of Community Participation
- What is it?
- What are some of the activities the community can be involved/participate in?
- *Brain storm and summarize with your presentation.*

Degrees of Involvement

Levels of Participation- give more examples

Stages of Development

- Magic, Naïve and Critical stages

#### 10.67 **CHANGES – SUB GRANTS**

- What is a Grant?
- Aims of Grants
- Types of Grants
- Who qualifies?
- Areas not to be funded
- Capacity building after awarding the Grant
- Grants Management Committees and its functions
- Application format – explain the format



**10.68 MONITORING AND EVALUATION**

Some Objectives of Monitoring and Evaluation.

Who monitors whom? At what levels is the monitoring going to be done.

The Key to direct Monitoring is an *Action Plan*.

Helpful tips in monitoring, what to monitor.

Characteristics of a good Monitor.

**10.69 TRACKING DOWN INDICATORS OF OUTREACH AND IMPACT**

- Types of reaching out – Outreach, Direct and Indirect
- Advantages and disadvantages of each type
- Relationship between Outreach and Impact. (The more the Outreach the greater the Impact)
- Types of Impact

***OUTREACH DIARY***

- Explain the elements of an outreach diary.
- Give two or more examples, let the participants contribute theirs too.

***IMPACT DIARY***

- Explain the elements of an impact diary and the difference between positive and negative impact diaries.

**10.70 PLANNING WHERE, WHEN, AND WHOM TO START WITH**

- Draw a Zonal-level facilitators' working area.
- Indicate schools and villages around the schools on the map.
- Decision on where to start and then spread outwards. Whether to start with difficult or easy area, explain the advantages and disadvantages of each.
- The order of training- Community Leaders, PTA, Teachers, and Peer Outreach Workers.

**10.71 MAPPING OF ZONES**

Start with Education-

- Let him/her describe his/her zone boundaries that cover all the schools in his/her zone.
  - Then let Health Personnel who has his/her most areas in the Education zone come and explain his or her catchment area.
  - Then the Community Development Assistant explains his/her area then compromise on a defined zone.
    - Expect trade-offs on some areas/schools
- Then when all the zones are defined let the zonal members draw zonal maps of that defined area.

10.72        **PLAN OF ACTION**

- Elements of an Action Plan are defined
- **The activities to be planned are discussed as follows**
  - Community Based Workshops
  - Sensitization Meetings, Focus Group Discussions
  - Role Model, Identification and Utilization
  - Monitoring, Follow-up, Supervision
  - Zonal /District Meetings
  - Zonal Open Days

10.73        **BUDGETING**

- Workshop regulations – what is allowable or not
- Workshop cash request drawing
- Follow-up / Supervision Cash Requests
- The cash requests are made and *approved* right there at the workshop by the endorsement of a *Signature, date* of a *CHANGES officer*

10.74        **TIPS ON HOW TO RECONCILE**

- Need to reconcile to CHANGES, Creative Associates Inc and USAID by certain dates
- Accountability
- Issues of embezzlement
- Go through the tips one by one then explain with examples
- Workshop cash request reconciliation
- Follow-up and Supervision Reconciliation

10.75        **PROCESS OF DRAWING PLANS OF ACTION**

- Go through each step with participants.
- When to budget, put dates, facilitators and how to compile a single plan of action.

10.76        **PLANNING AND BUDGETING**

- Facilitators with the lead of CHANGES officers go into groups assisting in budgeting and planning.
- Make sure that the planned activities are many and varied.
- That the budget attached is realistic not under estimated and not exaggerated.
- It is the duty of only CHANGES staff to approve the cash request.
- Make sure that the approved plan of action and budgets are copied in triplicate.
  - 1) Original to CHANGES office in order to compile a district typed plan of action.
  - 2) Duplicate goes to the zonal facilitators themselves.
  - 3) The triplicate goes to the district team
- There is need to summarize the funded activities like: -

- Workshops and follow-ups separately, so that it is known who gets what amount in each month.
- Reduce risks where possible that one zonal facilitator should not receive funds for more than one Workshop.
- Compile the summary sheet for individual Follow-up and Supervision funds for each month.

Make Accounts Summaries of how much funds will each Zonal facilitator receive in each month.

## **11.0 EVALUATION OF THE TRAINING WORKSHOP**

Apart from daily evening evaluation by the District, Provincial Teams and Facilitators, the participants were given a chance to evaluate the daily proceedings during the course of the workshop. At the end of the workshop, the entire workshop was evaluated using an Evaluation Form (see **attachment 4**) at the end of the workshop.

From the evaluations the three line Ministries – Education, Health, and Community Development and Social Services felt that the training met the needs of the Zonal-level Facilitators. They also strongly felt that there is need to train the three main target groups – Community and Influential Leaders, PTA and Teachers separately. It was unanimously agreed that for fast and effective coverage of the districts, this methodology of training Zonal-level Facilitators be adopted even though there was need to critically look into

- (a) The inclusion of Clinical officers and Nurses in the Zonal-level Facilitators' team
- (b) The implications of not including the Head teachers, and Zonal Heads in the Zonal Facilitation workshop.
- (c) The allowances rates to be given to various groups during the implementation of this program – teachers, community leaders etc to avoid unnecessary delays during planning.

## **12.0 SOME OF THE PERTINENT ISSUES DISCUSSED**

During our interaction with the CHANGES CSMC staff and the Zonal-level Facilitators' Training, a number of pertinent issues were raised and some of which included:

## **1. How to effectively monitor and assess the programme**

- *Utilization of different Levels of monitoring*
  - Ministry
  - Provincial
  - District
  - Zonal
  - Community
  - Programme (CSMC team)
- *Having diverse Personnel to do the monitoring*
  - Desk officer
  - District team supervisors
  - Field workers (zonal-level Community Facilitators)
  - Community Leaders
  - CHANGES staff
- *Properly Timing of the monitoring exercise*
  - At the on set of the programme
  - Non-funded phase
  - Funded phase
  - Post-funded phase

**NB** Proper planning to avoid confusion (e.g. Monitoring one area leaving the other areas).

- *Having the Right Tools Utilized in Monitoring*
  - Observation
  - Interviews/discussions
  - Reports
  - Case studies etc.

## **2. In order to ensure ownership of the programme by various line Ministries, Personnel and the Community at large, the following was covered:**

- Doing everything in a participatory and transparent manner. (Every effort should be made to avoid telling the various target groups what they should do but rather facilitate discussions from where the people will find constraints and solutions on their own).
- Involving the target groups from the inception of the programme.
- Developing realistic and implement able plans of action.
- Involving the target groups in the monitoring and assessment of the programme.

- Proper channeling of reports i.e. following the existing government and community structure.
- Building in competition amongst the members of staff and community through role modeling, exchange visits, publicizing their activities using mass media, awarding certificates, T-shirts etc.
- The Ministry staff and the community include the CSMC activities in their normal day-to-day activities.
- Providing assistance wherever the Ministries and Community are unable to move forward – this could be technical or financial etc.
- Providing a forum where the various target groups would meet to share experiences and map out the way forward (Community, School, Zonal, and District- level meetings).

**3. On how to manage a large number of community action plans the following was covered:**

- Encouraging coordination amongst various target groups on their drawn-up action plans – this would lead to having a very comprehensive and consolidated Plan of Action.
- Opening up files for each district/zone for plans, reports etc.
- The Program office drawing a monthly activity plan (schedule), which will take into account the planned activities from the field.
- Displaying on the board some of the field (zonal) activities dates, and place where the events will take place.
- Drawing plans that will not show bias e.g. other zones districts are visited more than the others.
- Always giving feedback to those communities, zones, which invited you even if no one will be able to attend.
- Never to promise people that the program office will attend all their functions. Instill in the people that they are doing their activities to solve certain constraints and not for CHANGES people.
- Encouraging Zonal-level Community Facilitators to support the communities through their frequent supervision.

**4. Some of the hints mentioned on the role models to serve as peer trainers included:**

- The Process of identifying the role models
  - Look at creativity, productivity, honesty and integrity of individuals from the word go. i.e. during briefing meetings, data collection, training (field worker) community-based trainings, follow-up and supervision.
- Provide an opportunity for them to exercise their talent and expertise before confirming them to be peer trainers.

**5. In order to motivate and keep staff motivated throughout the project life span, the following advice was given:**

- Showing them that they are trusted and that the success or failure of the programme rests upon them. Allowing them to plan activities for their area in the way they think it would be developed.
- Supporting the staff by attending some of the activities organized in their areas.
- Publicizing those innovative, unique initiatives through newspapers, newsletters, Television, radio etc.
- Fulfilling agreements e.g. sending funds at the agreed time.
- Not showing that one area, person etc. is more supported/liked than the others.
- Acknowledging and appreciating the reports that the staff sends to the offices. Never look down upon somebody or belittle any efforts that they make towards achieving CHANGES CSMC goals and objectives. Understanding their problems and always trying to find solutions together. Let them be part and parcel of the solution.
- Supporting the staff by providing guidance, expertise and at times linking them to the appropriate stakeholders or partners who can assist in solving the problems.

**6. The likely obstacles that might be met during CSMC programme.**

❑ *Financial*

- Delay of funds from Livingstone, Lusaka or Creative Associates Inc could totally breakdown all the field planned activities e.g. workshops. It is ideal to request funds in advance (if it comes in monthly installment).
- Exaggerated budgets by some field staff when planning and budgeting for the activities. There is need to survey and have some ideas of prices in the areas

(transport, refreshments etc.). Be transparent with money by displaying the rules and policies that are governing the project funds.

- Reconciliation of funds that were disbursed to the staff can be a problem at times. Some members cheat on receipts or do not want to reconcile at all. It should be clearly stated during the workshop that false receipts would not be accepted (at all times genuine, and not altered receipts would be the only ones accepted). Dates when reconciliation is to be done should be set and that anyone not reconciling would not be given any more money. In a nutshell, reconciliation guidelines and procedures should be put in place and explained to the concerned members of staff.
- There might be changes in prices of commodities e.g. fuel, drinks etc. while the budgets were already approved. There should be allocation of funds per district, zone, workshop etc. before the actual budgeting exercise. When making the actual budgets for the zones and districts, some contingency funds should be put aside to take care of some of the eventualities.

□ *Personnel*

- Some District, Provincial and Ministry officials may not be supportive. The project staff members should try to encourage them to develop Plans of Action, assign to them some responsibilities, and provide support wherever the office can. Understanding of the government system is important and mechanism should be put in place in order to work with and through the system.
- Transferring of field workers in and out of the project area while the project is in operation. Discussions should be held with Ministry, District, and Provincial Officials at the beginning of the program so that such transfers are minimized. Efforts must be made to train those that were not trained and yet are to carry out the project work.
- Some members of staff have the “allowance culture.” This can also be traced to the Community Members as well as teachers. Time should be spent at the beginning of every workshop explaining the policies that have been put in place by the organization. A look at what the government has put in place on allowances and the available resources should guide the program on what it can plan on allowances. (**Never be too deviant from the existing situation**). A little difference from prevailing rates is ideal. Efforts should also be made to explain to the concerned target group that the project in place is governments’ program and as such the government officials (supervisors) should assist in explaining how this program was planned (for who, why, when, for how long etc.).

❑ *Organizational*

- Poor or lack of transport to the work areas. Some field workers have large areas while others are small; some travel long distances while others cover short distances. The program should plan in advance what it could do to assist the field workers and each one should be looked at individually – **never generalize the solution.**
- Other commitments apart from the program's activities by field workers. Explanations should be made on this issue during field worker as to what they should do in case they are required by other organizations at the same time CSMC's work needs them. During planning the members of staff should be encouraged not to over plan! (They should leave some days for the other work).
- Delays in Delivery of funds to the field workers that they requested for and were needed by a particular time. There should be a proper study of the methods that could be utilized in delivering funds e.g. banks, by hand etc. and strategies be developed to effectively transfer the funds to the field workers.
- Program life span might not tally with the communities' implementation of their activities. E.g. school calendar, crop- planting season etc. when making Plans of Action this should seriously be looked into so that the impact or indicators of impact could be seen before pulling out into another area.
- Poor attendance by some target groups during CSMC functions or programs. The field workers need be taught on how best they can publicize activities or how best they would send messages.

**ALL IN ALL RESPECT THE FIELD WORKERS AND SEEK THEIR KNOWLEDGE ON ISSUES THEREBY MAKING THEM OWN THE PROGRAM**

**7. Some of the Challenges that CSMC is likely to face:**

- The products or benefits of the program (practices, attitudes knowledge) are often more complex and controversial sometimes difficult to quantify and often take longer to appear.
- The channels for the campaign may be more difficult to utilize and control.
- It may seem very expensive programme/project to undertake even though the benefits surpass the cost incurred.
- Analysis of social products may be difficult at times.



- Most often the grass root beneficiaries and implementers have very limited resources.
- Change or benefit, success of the program is directly influenced by cultural values, economic necessities, family needs, and cost and benefits far beyond obvious.
- The consumer/beneficiaries of the programme is to be seen at the center of all decision making. Their needs, preferences, beliefs, resources and alternative options define the course of direction hence rigid program plans will not apply here.
- Trade-off in exchange and resistance points needs to be considered which may prevent the beneficiary from taking action.

### 13.0 RECOMMENDATIONS

- 1) CHANGES CSMC staff must come up with a core team of trainers and for the next district to be trained (Kalomo) the trainers **MUST** come from persons who had attended or facilitated during Kazungula Zonal-level Facilitators workshop. They should be conversant with the subject matter content and the flow of the training session. **It is not just a matter of knowing the content but also knowing how to deliver it in a convincing and motivating manner.** The team could include Isabel Nanja and Cecilia Sakala apart from the CHANGES CSMC team. The CHANGES staff need to appoint a leader of the trainers and it should be born in mind that the Southern Province Program Coordinator might not be a full-time trainer, unless the program finds somebody who could do the pressing administrative work. She will, however, be required during the plans and budget sessions.
- 2) Before holding any district workshop, Kalomo inclusive, a planning meeting should be held. At this meeting mapping should be done in order to establish who exactly would be called from each zone for the Zonal-level Facilitators training. We strongly recommend that the Environmental Health Technicians be targeted instead of Nurses and Clinical Officers apart from Community Development Assistants and Zonal Inset Providers/ Zonal Heads/and Zonal HIV/AIDS Focal Point persons. As much as mere teachers were trained in Kazungula, there are shadows engulfing their performance. The district team should comprise of the DEO, DIP, DIS, DCDO, and one district health officer who is responsible for EHTs.
- 3) Before the actual workshop, there is need for all the trainers to come together, discuss the training materials and share topics and not just informing them individuals of what topics they are to train. What was done for Kazungula is best suited for trainers who are well versed in the goals and objectives of the program, know the subject matter content and were involved in the development of the training materials, and are very well experienced in training methodologies.
- 4) CHANGES CSMC must come up with typed Zonal Facilitators work plans for Kazungula District which should be tabled before the Provincial and district officials who would draw their own monitoring work plans from them. Particular attention

should be made to monitor the first workshops, and Focus Group Discussions. This requires that the Provincial and District team draw their budgets as well. **CHANGES CSMC AND MINISTRY OFFICIALS MUST MONITOR THE ZONAL-LEVEL FACILITATORS FOR FAILURE TO DO THIS WOULD RESULT IN A WASTE OF ALL THE RESOURCES THAT WERE INVESTED IN THE TRAINING.**

- 5) Money requested by the Zonal-level Facilitators for workshops and follow-ups must be made available by the date when it is required.
- 6) Ways of cutting down the cost while at the same time effectively implementing the Program should be explored by the CHANGES CSMC staff and the Provincial Officers. Some of the ways identified include provision of ZK80,000 subsistence allowance to workshop participants instead of giving them food, accommodation and ZK40,000 out of pocket allowance, selecting the Zonal-level facilitators while looking at the geographical set-up of the district etc.
- 7) The Provincial, District and CHANGES CSMC officials should closely monitor Kazungula district to see how the Zonal-level facilitators are performing. This should give a picture as to how best to select these facilitators. There is already some doubts about the utilization of the Clinical Officers and Nurses as Zonal-level Facilitators in this program even though the district health officials think otherwise.
- 8) CHANGES CSMC staff is small in number – 4. There is need for them to be meeting at the beginning of each month where they would look at the field action plans and from them draw their monthly activity plan. This plan would be shared with the Ministry officials well in advance so that they could join them to the field if they have time. Each member of staff should be committed to the drawn up plan of activity- **NO ROOM FOR WAITING TO BEING TOLD WHAT TO DO BUT CRITICALLY THINKING OF WHAT SHOULD BE DONE IN ORDER FOR THE PROGRAM TO SUCCEED!**
- 9) For effective monitoring of the program the two vehicles will not suffice. There is need to have another vehicle more especially when the program expands to the other districts.
- 10) Other IEC communication tools should be put in place to support the person-to-person interventions. For example: Radio programme, Newsletters, Television e.t.c
- 11) In the absence of the District accounts person and the District Education officer/ District Inset Providers handling money transactions, since they are not trained, CHANGES CSMC office should handle the transactions for Kazungula during the first month of disbursement.
- 12) Where the District Education Officers, District Inset Providers and Accounts persons do not come for training or are unable to handle money, CHANGES CSMC should

explore the methods of utilizing banks using wire transfers and identity cards for the recipients. Some of the features on the Identity Cards could include: The face having a CHANGES CSMC official stamp, the holders' passport size photo, the name of the holder, position or post, CHANGES logo and Address, Identity number which could start from 01 for each district and for example Kazungula the first Identity card could read KZ 01 where KZ stands for Kazungula. The backside could have CHANGES CSMC signatory signature, the signature of the holder, and the validity period. This Identity card is laminated. On the procedure, CHANGES CSMC would wire the money to the concerned Bank with instructions sanctioning the Bank to pay to the Zonal-level Community Facilitator the amount allocated to him/her upon the production of an Identity Card. The Zonal-level Community Facilitator then reconciles to CHANGES CSMC accounts office with the assistance of the District Desk Officers.

#### **14.0 CONCLUSION**

Generally the training went on well and very good results are expected from the field. It is quite a challenging task looking at the geographical situation of the district and that most of the government staff is lacking transport. However, looking at the zeal the Zonal-level facilitators had, there is no doubt that the program will succeed. There might be some delays in conducting the next up coming workshops because of the issues mentioned above that have to be sorted out first. However, if a better foundation is made, it will be easier and smoother for the next districts.

▪ *Attachment 1*

**TENTATIVE TIME ALLOCATED TO EACH TOPIC DURING TRAINING OF  
THE ZONAL LEVEL FACILITATORS**

<u>TOPIC</u>	<u>TENTATIVE TIME ALLOCATED</u>
Introductions and Participants Expectations	2 Hours
Goals and Objectives of CHANGES	1 Hour
Gender and Equity	3 ½ Hours
Community Participation	2 Hours
HIV/AIDS	2 Hours
Community Action Plan	2 Hours
Project Proposal Writing	3 Hours
Research Findings	4 Hours
Resource Mobilization	1 Hour
The Winning Facilitator	3 Hours
Strategies For Sensitizing, Motivating, and Mobilizing communities	5 Hours
The Role of the various Ministries in CHANGES program	3 Hours
Planning (Theory and Practical)	3 Hours
Budgeting and Reconciliation (Theory and Practical)	1 ½ days + 2hrs
Monitoring and Evaluation (Tracking Indicators of Outreach & Impact)	3 Hours
Community Based Workshops	1 ½ Hours
Reporting	1 Hour
Field Practical on Focus Group Discussion	½ day + 2 hrs
Utilization of Peer Outreach Workers	2 Hours

**Attachment 3**

**KAZUNGULA ZONAL LEVEL FACILITATORS' WORKSHOP  
29<sup>TH</sup> APRIL TO 10<sup>TH</sup> MAY 2002**

**LIST OF PARTICIPANTS**

**1. ZONAL LEVEL FACILITATOR**

<b>N0</b>	<b>FULL NAME</b>	<b>INSTITUTION</b>	<b>TITLE</b>	<b>POSTAL ADDRESS</b>	<b>STATION</b>
1	Gladman Mweetwa	MOE	Teacher	60270	Mutwanjili school
2	Audrey M Chiwala	MOE	Teacher	60654	Riverview school
3	Annie Silali	MOH	Nurse	60596	Kazungula RHC
4	Kerony Mungala	MCDSS	CDA	61111	Mukuni
5	Theresa Sibulowa	MCDSS	CDA	60017	Katombora
6	Charity Chanda	MCDSS	CDA	60017	Mambova
7	Alex Musweu	MOH	Nurse	60596	Moomba RHC
8	Charles Nawa	MOE	Teacher	60017	Katombora school
9	Felix Moonga	MCDSS	CDA	60484	Simango
10	Melvin Y Muhau	MOE	Teacher	60554	Mukni school
11	Justin Malilakufwa	MCDSS	CDA	60487	Mambova
12	Susan Siatwiko	MOH	Nurse	60596	Siakasipa RHC
13	Laite Hazonde	MOH	Nurse	60596	Katombora RHC
14	Kamwendo Phiri		CDA	60017	Katombora RHC
15	Karen L Mudenda	MOE	Teacher	60007	Makunka school
16	Davies Muleya	MOE	Teacher	60654	Libala school
17	Cecilia C Mudenda	MOE	Teacher	60654	Musokotwane sch
18	Crispin Akufuna	MOH	Clinical officer	60596	Sinde RHC
19	Rosemary Phiri	MOH	Nurse	60596	Kabuyu RHC
20	Halubono Simweeleba	MOH	Nurse	60596	Mukuni RHC
21	Jonathan Chilombe	MOE	Teacher	60270	Mabwa school
22	Apulen Malumbe	MOE	Teacher	60270	Nzwinde school
23	Kapemba C Kakoma	MOH	Clinical officer	60596	Nyawa RHC

## 2.DISTRICT STAFF

NO	FULL NAME	INSTITUTION	TITLE	STATION
1	Mr. Elvis A Mwanalushi	MOE	Examination Officer	Kazungula DEO/Livingstone
2	Mrs. Lena N Tembo	MOH	Clinical care expert	Kazungula DHMT/Livingstone
3	Ms. Precious M Chembo	MCDSS	Community Dev.Officer, District	Kazungula District/Livingstone

## 3.PROVINCIAL STAFF

NO	FULL NAME	INSTITUTION	TITLE	STATION
1	Ms.Isabel Nanja	MOE	Principal Inspector	Livingstone
2	Mrs. Cecilia N Sakala	MOE	Senior Inspector of schools (science), provincial	Livingstone
3	Mr. Mubita Mubita	MOE	Senior Inspector of schools (social sciences) provincial	Livingstone
4	Mr. Trust M Hanguwa	MOE	Senior Planning officer, provincial	Livingstone
5	Mrs. Lilian Muvwanga	MOE	Provincial Resource center coordinator	Livingstone
6	Mr. Henry S Sakanya	MCDSS	Comm. Dev Officer, Provincial	Livingstone

*Attachment 4*

WORKSHOP EVALUATION

1. How would you rate the overall impression of the workshop
  - a) very bad
  - b) bad
  - c) good
  - d) very good
  
2. What did you like about this workshop?
  - a) .....
  - b) .....
  
3. What did you not like about this workshop?
  - a) .....
  - b) .....
  - c) .....
  
4. What topic(s) did you find most useful (put them in order of usefulness)
  - a) most useful .....
  - b) very useful .....
  - c) Useful .....
  
5. How would you rate the facilitator of this workshop (✓) tick
  - a) very knowledgeable
  - b) knowledgeable
  - c) Not knowledgeable

Why?

.....

.....

6. How helpful would you rate this workshop on the knowledge you gained on Community Sensitisation and participation (✓) tick
- a) Very helpful
  - b) Not helpful
  - c) helpful



## **Appendix C**

### **Partnership for Child Development (PCD) Baseline Survey Report**



## **School Health and Nutrition Programme**

**2<sup>nd</sup> April – 12<sup>th</sup> April 2002**

## **BASELINE SURVEY REPORT**

**Trip Report School Health and Nutrition Programme Year 1**  
**Feedback from Baseline survey, presentation of available data and forward planning for**  
**Year 2 Survey**

*As part of the CHANGES Programme*

*Report from PCD Consultants:*      *Michael Beasley (Operations)*  
   *Richard Suswillo (Programme Manager)*  
   *Lesley Drake (PCD Coordinator)*  
   *Debbie Nolder (Nutritional Assessment Consultant)*

**Objective**

To disseminate the preliminary findings of the Year 1 baseline survey, and to hold discussions on the Year 1 survey and reach agreement on personnel and logistics for the Year 2 survey.

**Activities**

- 1. Presentation of preliminary findings from the baseline survey** (held at Fairview Hotel, Lusaka on Thursday 4<sup>th</sup> April 2002 presentations forwarded to CHANGES on CD).

*Objective:* To present findings of baseline survey to the donors and other interested parties.

**2. Report of findings from baseline survey**

*Objective:* To undertake a baseline health and nutrition survey of schoolchildren in Eastern Province. This survey will provide the basis for an impact evaluation of the health and nutrition interventions provided to children through schools as part of the national school health and nutrition programme – CHANGES. The analysis of the data will form the first contribution of this three-year scientific assessment.

*Results:* The number of children included in the intervention school study was 1392; with 50.3% boys and 49.7% girls. Distributions by age and sex are given in fig 2.1.

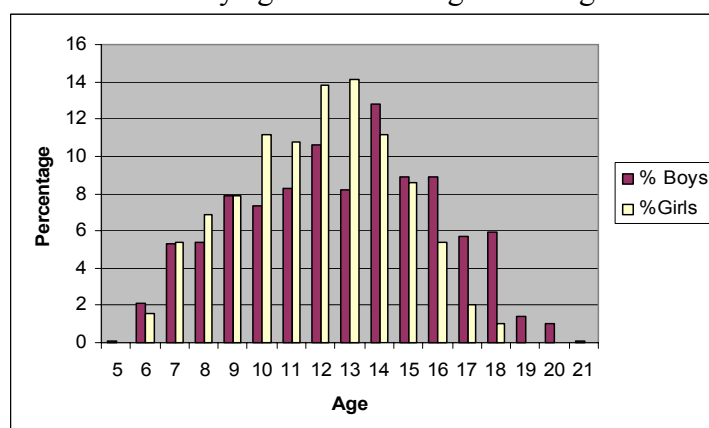


Fig 2.1 Percentage boys and girls by age.

The mean age was found to be 12.25 years.

Stunting, underweight and thinness were used as growth indicators of the intervention population. Specifically, the prevalence of stunting was found to be 36% with an age and sex distribution shown in fig 2.2.

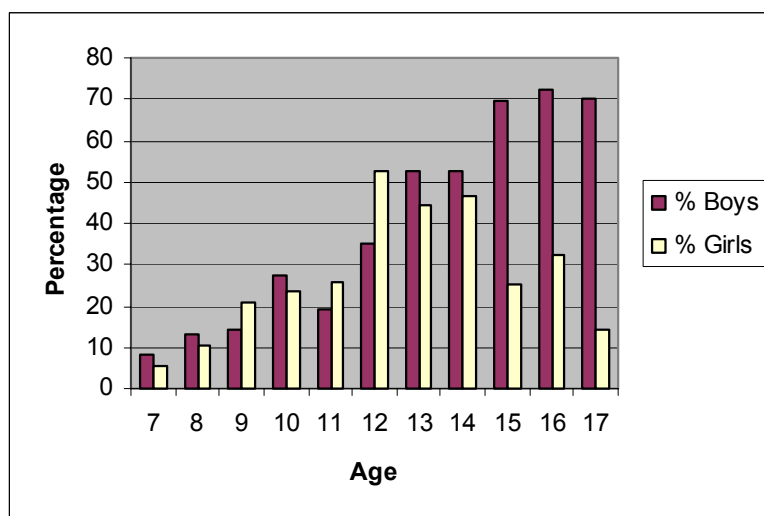


Fig 2.2 Percentage boys and girls stunted by age.

The prevalence of children who were underweight was calculated at 22% with a variation in age and sex distribution shown in fig 2.3.

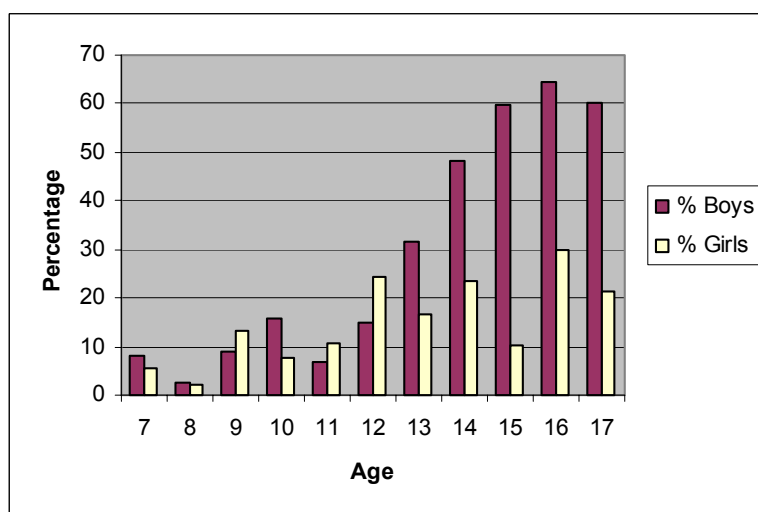


Fig 2.3 Percentage boys and girls underweight by age.

Finally, body mass index (kg/m<sup>2</sup>) could be calculated for 99.8% of children giving a 21% prevalence of “thinness” shown in fig 2.4.

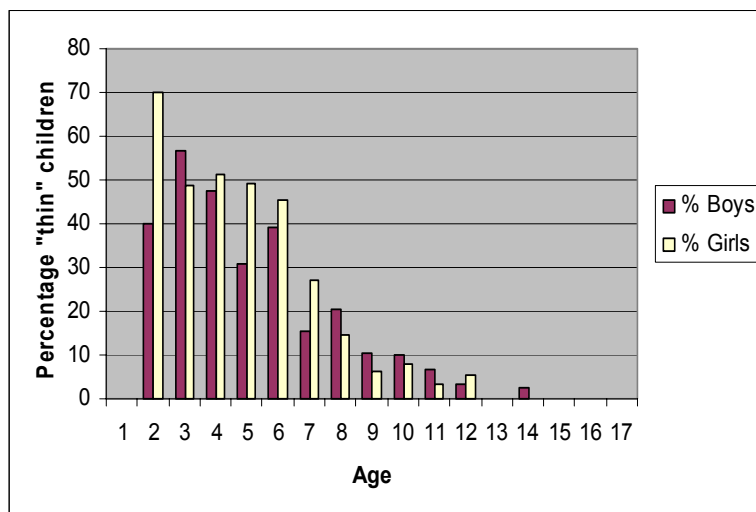


Fig 2.4 Percentage boys and girls “thinness” by age.

The prevalence of hookworm was 55% with a mean intensity of infection of 247 eggs per gram of faeces. Percentage of infection did not appear to vary greatly with age (fig 2.5).

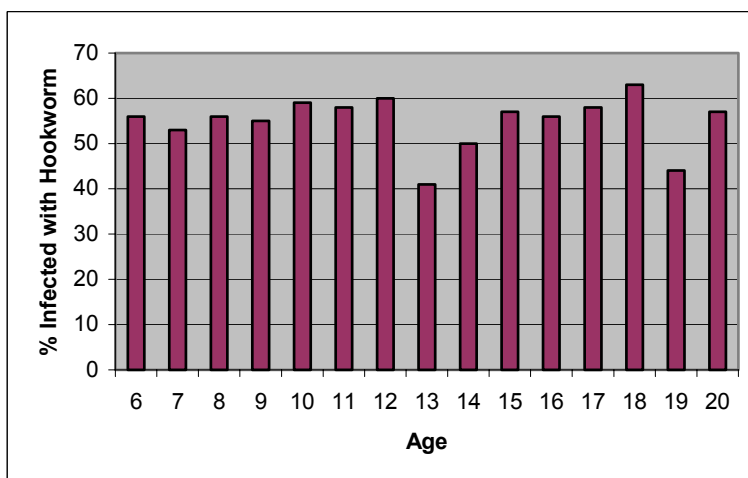


Fig 2.5 Percentage hookworm infection by age.

The prevalence of bilharzia infection was 48%; with a mean intensity of infection of 77 eggs/10 ml urine (WHO cut off for severe infection is 50 eggs/10 ml urine). Variations by age are clearly visible in fig 2.6.

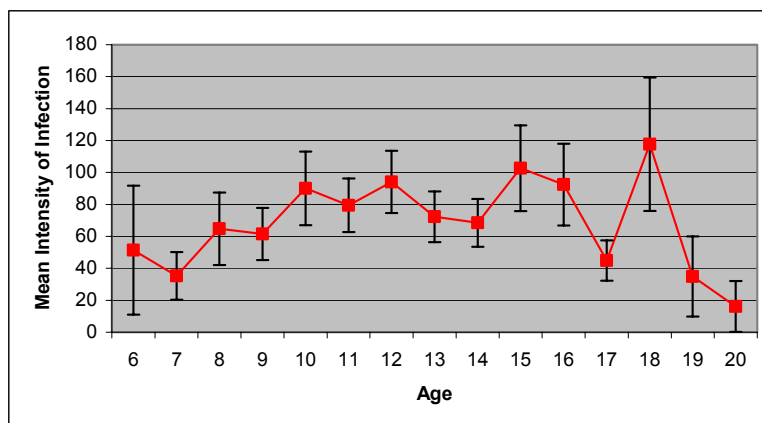


Fig 2.6 Mean intensity of *S. haematobium* by age (showing standard error values).

Data concerning infection with *S. mansoni* were available for 95% of children and gave an overall prevalence of infection of 5%.

The prevalence of roundworm and whipworm was found to be less than 2%.

The overall prevalence of anaemia was 33% (haemoglobin < 120g/l) with 0.5% being found to be severely anaemic (haemoglobin < 85g/l). Variations by age and sex were found as follows (fig 2.7):

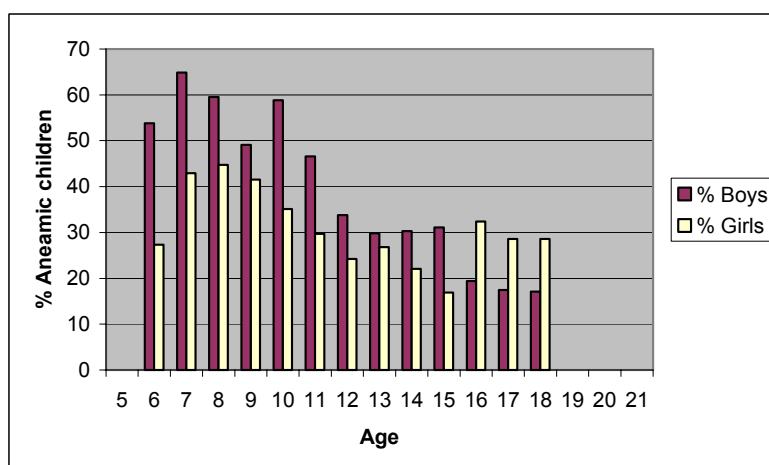


Fig 2.7 Percentage boys and girls anaemic by age.

In addition to the above, a schistosomiasis questionnaire, designed by teachers and health workers from Eastern Province was validated. The questionnaire included the following two questions:

1. Have you had bilharzia during the last two weeks?
2. Have you experienced blood in your urine during the last two weeks?

The response to these two questions was highly similar, with 34% of children responding positively to question 1 and 33% to question 2.

Analysis of the sensitivity (% true positives detected) and specificity (% positive responses that are true positives) of question 1 (have you had bilharzia?) resulted in a 48% result for sensitivity (58% for boys and 38% for girls) and specificity was found to be 71% (71% for boys and 72% for girls). Analysis of question 2 results (have you had blood in your urine?) yielded very similar results of 48% sensitivity (57% for boys and 39% for girls) and 73% specificity (75% for boys, 69% for girls).

Questionnaire techniques usually underestimate the prevalence of infection with *S. haematobium* by around 20%. In this case, overall, both questions underestimated *S. haematobium* infection in Eastern Province by around 15%.

This suggests that the questionnaire developed at the August 2001 workshop is working extremely well.

Fig 2.8 shows prevalence of Schistosomiasis against incidence of bilharzia as reported by responses to question 1 (do you have bilharzia?) following application of the questionnaire in Eastern Province.

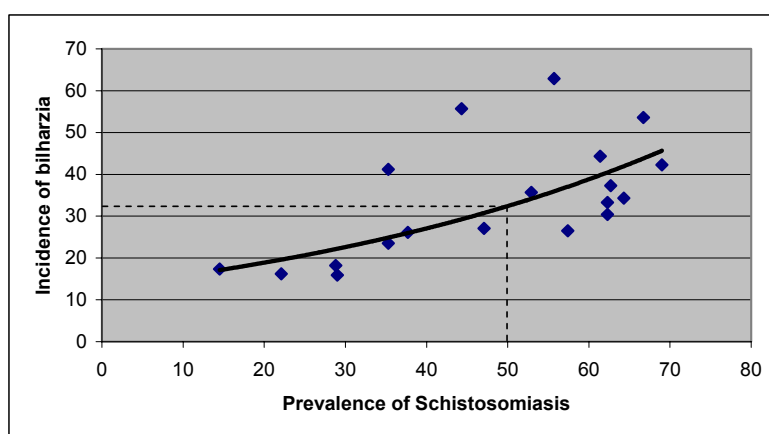


Fig 2.8 Plotting prevalence of Schistosomiasis against incidence of bilharzia as reported by questionnaire

Fig 2.9 shows prevalence of Schistosomiasis against incidence of “blood in urine” as reported by responses to question 2 (have you had “blood in urine?”) following use of the questionnaire in the Eastern Province.

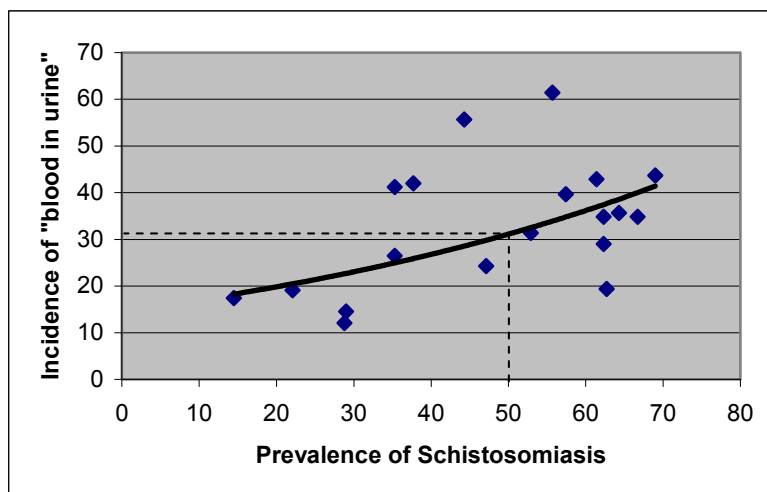


Fig 2.9 Plotting prevalence of Schistosomiasis against incidence of “blood in urine” as reported by questionnaire

WHO guidelines specify that a prevalence of 50% infection warrants mass treatment; since both questions underestimated *S. haematobium* infection in Eastern Province by around 15%, this would suggest that a positive response to the questionnaire of greater than 35% indicates the need for mass treatment with praziquantel.

### 3. Report of mini-survey of intervention schools six months post-intervention.

(Dr Michael Beasley; April 2002)

*Objective:* To provide feedback on the parasitological and health parameters which could be related to the baseline interventions. The number of children surveyed was 141 divided between 4 schools (Lukhalo, Mnukwa, Cronje and Kapatamoyo).

*Results:* The survey showed that the anthelmintic treatments given last November had been highly effective.

The prevalence of hookworm was 8% (compared to 55% at baseline). The mean intensity of infection had reduced enormously, from 247 eggs per gram(epg) of faeces at baseline to 6 epg faeces at follow up (a reduction of 98%). As morbidity (illness) is directly related to intensity of infection, this indicates that the treatment given has been highly effective and has significantly reduced morbidity.



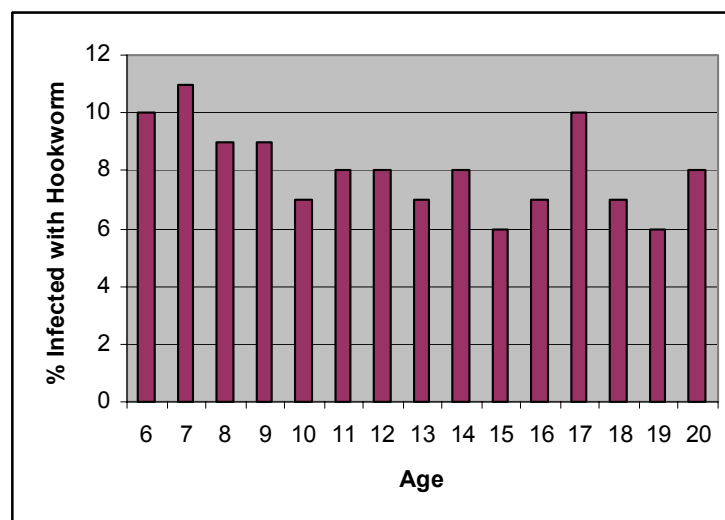


Fig 3.1 Percentage hookworm infection by age.

The prevalence of bilharzia was 24% (compared to 48% at baseline). The mean intensity of infection had reduced from 77 eggs/10ml urine at baseline to 21 eggs/10 ml urine at follow up (a reduction of 73%). Most infections observed at this time point were very light. Again, indicating that morbidity (illness) has been significantly reduced. It was noted that 2 children had experienced very high rates of infection during the previous 5 months (one showing an intensity increase from 0e/10ml at baseline to 1167e/10ml at follow up and another from 2e/10ml at baseline to 1000e/10ml at follow up).

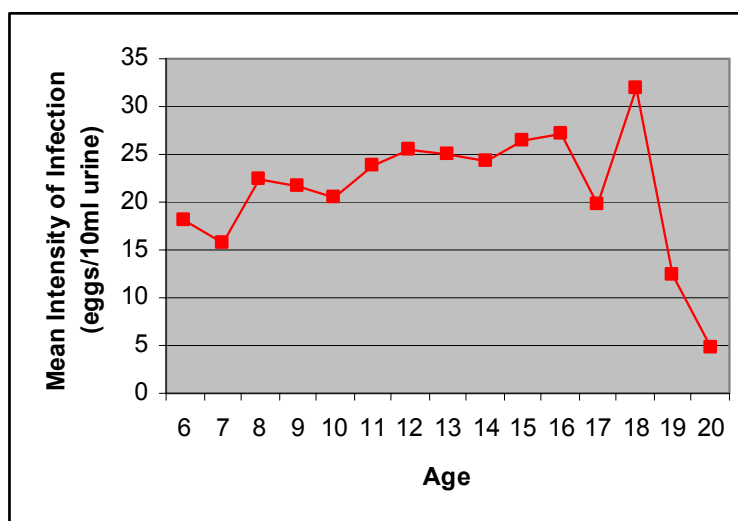


Fig 3.2 Mean intensity of *S. haematobium* by age

Eastern Province has experienced severe famine during the last few months and this was demonstrated by the anaemia data collected. The overall prevalence of anaemia

(haemoglobin < 120g/l) had increased from 33% at baseline to 75% at follow up. The prevalence of severe anaemia (haemoglobin < 85g/l) had increased from 0.5% at baseline to 5% at follow up. (All children found to be severely anaemic at follow up were referred to their nearest health centre).

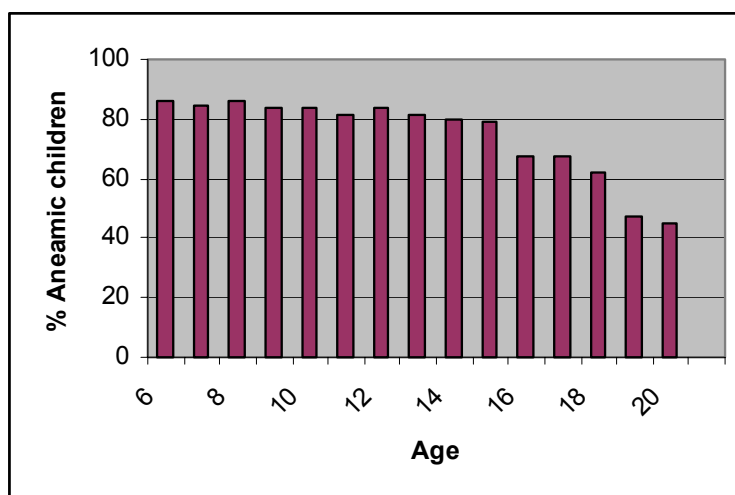


Fig 3.3 Percentage children anaemic by age.

#### 4. Discussions

*Objective:* To update all parties on post-baseline survey activities, to discuss forward planning for re-survey and division of costs.

Representatives present:

Mrs Catherine Phiri (Chairperson, MoE School Health and Nutrition Focal Point);  
 Dr Emmanuel Kafwembe (Director, TDRC)  
 Dr David Mwandu (TDRC)  
 Dr James Mwansa (UTH)  
 Dr Ed Graybill (CHANGES, Chief of Party);  
 Dr Paul Freund (CHANGES, School Health and Nutrition Manager)  
 Mr Josias Zulu (CHANGES, Health Co-ordinator))  
 Mrs Catherine Chirwa (Senior Inspector of Schools, Chipata)  
 Dr Elena Grigorenko (Successful Intelligence Co-ordinator)  
 Ms Paula Kapungulya (PCD/SI facilitator)  
 Dr Michael Beasley (PCD)  
 Mr Richard Suswillo (PCD)  
 Dr Lesley Drake (PCD)

#### *Post-baseline survey*

Dr Freund had been visiting the intervention schools and reported that the micronutrient supplementation regime was being adhered to with only temporary disruptions to the schedule. In one school, food shortages affected attendance where approximately only 20% of survey

subjects received supplements but as crops began to be harvested the pupils returned to school for their supplements.

The SHN programme has received publicity both in the media and during a meeting of EP headmasters.

Teacher training for delivery of interventions—in two districts in EP there are eighty schools with trained teachers.

Dr Mwandu who held responsibility for overseeing the sampling in the last three intervention schools in November 2001, stated that after the departure of the PCD advisors, no problems were encountered with either the sampling in the schools or with the parasitological analysis and transfer of blood samples for analysis to TDRC.

#### *Date of next survey*

The start date for the Year 2 survey should be in September soon after the schools have settled into to the new session. It is recommended that the survey work begins on **Monday 16<sup>th</sup> September 2002** to allow for optimum involvement by PCD staff. The survey work should be completed by **October 2<sup>nd</sup> 2002**;

#### *Forward planning*

The 2002 survey in Year 2 of the programme will have the following composition:

#### Recommended composition of teams for survey in 2002:

Field teams	Team manager Anthropometrist Phlebotomist Haemoglobin recorder Parasitology samplers	UNZA/MoE MoE MoH (nurse/tech) Technician MoE/teachers(2)
Laboratory teams	Parasitologist Parasitologist Parasitologist Parasitologist Bilharzia technician Gut worms technician  Haematology technician Haematology technician	UTH/TDRC/EP
Sensitisation/Facilitation team	MoE, CHANGES	
Treatment team	MoE?	
Data entry	UNZA	

Staff commitment pledged (April 2002):

TDRC 2 parasitologist/phlebotomists

Field teams	Team manager	UNZA/MoE
UTH	4 parasitologists	<i>Benson + 3</i>
NFNC	2 assistants	
University clinic	1?	
EP hospitals		<i>John, Jacob</i>
EP MoE		<i>Mrs Chirwa,</i>
EP Nutrn		<i>Herbert Soko</i>
Vet lab, Chipata	1 parasitologist	<i>Mr Wycliffe</i>

### *Division of Costs*

A meeting was held at the Changes Office on Friday 5<sup>th</sup> April, 2002 attended by Mrs Phiri, Dr Graybill, Dr. Freund, Dr. Kafwembe, Mr. Kantenga, Dr. Mwanza, Dr. Drake, Mr. Suswillo and Dr. Beasley.

The purpose of the meeting was to agree on how the costs of the follow up survey to take place in Eastern Province in September 2002 should be divided between MoE, CHANGES, TDRC and PCD. The meeting also included some discussion of *per diem* rates to be paid during the survey.

It was agreed that:

#### *1. Per diems*

PCD will be responsible for paying per diems of UTH and UNZA staff who will travel to Eastern Province to take part in the survey. These will be paid at a rate of 150,000 kwacha per day. PCD will pay all lunch allowances of all Eastern Province Veterinary Laboratory staff taking part in the survey.

MoE will pay all allowances of MoE and NFNC staff travelling to Eastern Province and all lunch allowances of all MoE and MoH staff based in Eastern Province.

TDRC will pay all allowances of all TDRC staff involved in the project.

Changes will pay all per diems of all Changes staff involved in the project.

#### *2. Fuel Costs*

MoE will pay for the fuel costs for four MoE vehicles used during the survey. CHANGES will be responsible for all other fuel costs.

#### *3. Hire of the Provincial Resource Centre, Chipata*

CHANGES will be responsible for this cost.

#### *4. Snacks purchased for the survey*

CHANGES will be responsible for this cost.

5. Laboratory consumables needed for the survey

PCD will be responsible for this cost.

6. Photocopying and form preparation

CHANGES will be responsible for this cost.

7. Purchase of exercise books and pencils for children included in the survey

PCD will be responsible for this cost. (care needs to be taken to ensure that we do not duplicate these with the cognition team).

## **Issues of Concern**

### 1. Going to Scale

PF was of the view that so far drugs have been procured only for the 80 EP schools to be mass treated for 2 years. He did not believe that any other procurement was in the pipeline for expansion in EP or otherwise.

It would be good to know:

- What drug procurement has taken place so far?
- What procurement needs to take place to go to scale in EP?
- How would more drugs be paid for?
- Is there a drugs budget in BESSIP?
- How is the expansion to other provinces to be catered for?

### 2. Delivery planning

PF mentioned that he is thinking about hiring a group called DELIVER to put together the EP school health delivery plan. PF is aware that this is a PCD deliverable.

### 3. Prepayment arrangements

CP has established an arrangement with DHMT under which DHMT provides referral services to all children enrolled at the study schools for a range of medical problems. The cost of this is 1,000 Kwacha per child per month, amounting to 68 million Kwacha per term (\$17,000).

Clearly this is completely unsustainable. PF to discuss alternative arrangements with DHMT.

Where has the money spent so far come from and is the donor aware of this?

### Summary and Recommendations

- The follow up survey has shown that reinfection with both hookworm and bilharzia has been slight. The results suggest that in Eastern Province, mass treatment for bilharzias and hookworm needs to occur only annually. There is no need to re-treat children every six months.
- The enormous increase in both anaemia and severe anaemia is clearly a matter of enormous concern. These data should be shared with the public health authorities in Zambia at the earliest possible opportunity.
- The Zambian tablet pole has been validated for use on a National scale.
- The questionnaire developed for Eastern Province is an exceptionally good tool for all Nyanja speaking communities. However, if expansion is to proceed, then workshops need to be held to adapt the questionnaire to other languages.
- If expansion is to proceed then mini-surveys need to be conducted in order to evaluate prevalence and intensity of disease.
- Problems encountered during random selection of pupils during the survey would suggest that pupils be selected from the school register.

### Outstanding Issues

- PCD and TDRC to ensure quality control of Vitamin A analyses is completed.
- PCD to submit final report on iron analyses – please refer to Appendix 1 for status.
- PCD to follow up on the SHN/MIS and EMIS collaboration ASAP.
- PCD/CHANGES/MoE to schedule preliminary workshop on HIV/AIDS Life Skills training for teachers.
- **Given the increased number of samples that will be involved in the re-survey in September, close consideration should be paid to the staffing levels for the field survey teams, the field laboratory teams and the scientific analysis teams e.g. TDRC.**

## **APPENDIX 1**

### **Detailed Baseline Survey Report**

#### **PURPOSE OF TRIP**

The purpose of this trip was to introduce and implement two enzyme-linked immunosorbent assays (ELISAs) for detecting iron deficiency anaemias to the TDRC laboratories in Ndola. These assays were required to analyse approximately 1400 baseline serum samples collected from schoolchildren in Eastern province (October / November 2001) for the Zambia School Health & Nutrition Programme run by the Partnership for Child Development (PCD) in collaboration with The Ministry of Education, Zambia, and USAID.

ELISAs for quantifying levels of serum ferritin (sF) and soluble transferrin receptor (sTfR) were to be introduced. sF is a sensitive indicator for measuring storage iron. Its clinical usefulness is limited where there is a coexistent anaemia of chronic disease such as occurs with acute and chronic inflammation, hepatitis and neoplasia. Soluble or serum transferrin receptor (sTfR) is unaffected in these clinical scenarios and is also useful in predicting functional iron depletion. Using the transferrin receptor/ferritin ratio may be useful in predicting both functional and storage compartment depletion and has a diagnostic accuracy of 92 % in separating true iron deficiency from anaemia of chronic disease.

#### **Interpretation of iron studies**

	<b>Iron deficiency anaemia</b>	<b>Anaemia of chronic disease</b>
Serum iron	down	down
Serum transferrin Or Serum total iron binding capacity	up or high normal	down or low normal
Serum ferritin	down	up or normal

The assay kits to be used were chosen according to ease of use, availability and cost. Assay kits were manufactured, supplied and shipped by Ramco Laboratories Inc. (4100 Greenbriar Dr. Ste 200, Stafford, Texas 77477, USA). Prior to the trip, the consultant pre-tested the assays using the controls and standards supplied with the kits. The Assay details were as follows:

#### **Serum Ferritin (sF) Assay** **(Ramco Laboratories Inc - catalogue number: S-22)**

*Spectro Ferritin* - an enzyme immunoassay procedure for the quantitative analysis of serum ferritin.



*Soluble (or serum) transferrin receptor (sTfR) Assay*  
(Ramco Laboratories Inc. - catalogue number: TF-94)

*TfR* - an *in vitro* enzyme immunoassay for quantifying human transferrin receptor in serum or plasma as an aid in the diagnosis of iron deficiency anaemia, particularly in the presence of other disease states.

The consultant's role *in situ* was to train local staff in the assays, ensuring the reliability and efficiency of assay protocols and the reproducibility of results. In particular, strong emphasis was placed on good laboratory practice, i.e. sample handling and storage, strict adherence to assay protocols and on data management.

## **TRIP ACTIVITIES / ACCOMPLISHMENTS**

### **STAFF:**

Four technical staff were assigned to the training programme. Two were qualified to degree level and two were qualified to Diploma level in biomedical sciences. The normal routine duties of these staff encompassed haematology, micronutrient analysis, clinical chemistry and molecular biology.

The staff were uniformly excellent: very keen, conscientious and diligent. See Appendix A for further comment.

### **TIMESCALE / SCHEDULE:**

Owing to delays in clearing the kits through Zambian customs, only nine days were available for the proposed work schedule.

### **SAMPLE CATALOGUING:**

The first task carried out by the consultant, Mr. Richard Suswillo and the technical staff was to catalogue the samples. Samples were stored in two formats: neat serum and dried serum filter spots. Both were stored at –20oC. Samples were separated into groups according to their initial two-digit school code (range 21 – 40) and then, within school group, by numerical order (range 01 – 72). Various sample parameters were recorded including:

- the volume of serum available
- the number of dried filter spots per sample code
- the presence of haemolysis. This was graded from mild (+) to total (4+).

The sample catalogue will be forwarded. Few samples, either serum or dried filter spots, were missing. The vast majority of samples comprised serum volumes sufficient for several assays. A significant number of sera contain lysed blood (which may prove to be a problem for sF assay – the sTfR assay shouldn't be affected).

Serum samples were re-frozen between assays and were stored for future use, by school code, at –20oC upon completion of both assays,

### **LABORATORY FACILITIES:**

The **laboratory space** provided in the Micronutrient Laboratory (7<sup>th</sup> floor) was sufficient. Benches were wiped with methylated spirits and benchkote was used where available. There was however a problem with ants and it was found that tubes containing the serum samples became covered with ants when they were put out to defrost. Several samples became contaminated by the end of the work although it is unclear as to whether this was due to the conditions under which the tubes were opened or the possibility that ants introduced contamination.

Completed assays and diluted serum samples were amassed until the end of the work and were then placed into an autoclave bag for disposal.

**Storage** facilities (cold room for storage of the kits, -20oC freezer for the samples) were good.

### **EQUIPMENT:**

#### **Microplate (ELISA) Reader**

An ELISA reader had been loaned to TDRC, specifically for the proposed work, by Mr Kantenga at the University Teaching Hospital (UTH) in Lusaka. The reader was an Organon Teknika Microwell System, Model OT530. Unfortunately, despite assertions that the reader worked and had been used recently, this machine was found to be broken in that the mechanism for sliding the plate into the reader was jammed. In addition, and more disturbingly, the filter holder did not move the filters into place when selected to do so, according to the programmed software. It was not possible to repair the machine.

Whilst a replacement was sought from UTH or from Kitwe Hospital (none was forthcoming), another machine was found to be present at TDRC. This was a new machine that had recently been installed in the Immunology Laboratory (Head: Dr Rosemary Musonda) specifically for HIV antibody assays. The machine was a Trinity Biotech Universal Microplate Reader, Model ELx800. Enquiries revealed that the staff had set up the machine and knew how to use it.

A horizontal rotating platform, was present. Extra pipettes and racks were scarce (see recommendations).

### **DRIED SERUM FILTER SPOTS:**

It was initially intended to elute serum from dried filter spots for the serum ferritin (sF) assay. To this end, several days were spent cutting out and eluting serum from the spots. Spots were excised using scissors (some using a punch), cut into small pieces and placed in microfuge tubes. One ml of PBS-tween\* was added and the tube was inverted several times to wet the filter paper. \*[After finding that the values were below the detection threshold (see below), subsequent elutions were made into smaller volumes (500uL and 750uL)]. Elutions were carried out at room temperature overnight.

Owing to the large number of samples for processing and lack of racks and time, it was decided to elute 2 spots (thereby effectively taking an average concentration of sF and sTfR from two

spots per sample), into a small a volume as possible (to maximise sF and sTfR concentrations) in a single tube.

As it transpired, the small sample volumes used (10uL) in this particular sF assay meant that the values obtained were below the threshold of detection. The original papers describing this approach had used much larger volumes of eluted serum (200uL) in a more sensitive “in-house” radioimmunoassay, a fact not picked up on by the consultant prior to the trip. Trial runs with increased eluted sample volumes (25 – 50uL) were carried out, however these also failed to generate interpretable data. It was not possible to increase the volumes to match those used by the initial study owing to volumes accommodated by the microtitre wells. So, with time pressing and the fact that sufficient neat serum was available, this approach was abandoned. Filter spots were brought back to the UK for further investigation. Approximately half of the sample filter spots were eluted. Eluted sera were stored at –20oC for future use.

It is felt that, at present, elution may result serious errors in final values owing to the different areas over which the spots were spread. Although spot areas were visually generally not very different, unless filter spot area was standardised (i.e. by using a punch), the volume of PBS-tween taken up by different areas of filter paper would likely affect the concentrations of sF and sTfR. A pilot study is needed to assess this approach and to investigate the possibility of using dried serum filter spots with these particular assays.

### **ASSAYS:**

Test runs of the two assays were set up by the consultant on day 2. Test runs were carried out primarily to check that the ELISA reader was functioning correctly, but these runs also served as training runs. Assays were carried out essentially according to the Manufacturer’s instructions. [For the sTfR assay, 1/100 dilutions of the serum samples were required. Dilutions were made by adding 990uL sample diluent to 10uL serum (cf 1000ul + 10uL as outlined in the protocol)]. Serum, not filter spots, were used in test runs for both assays.

Visually, both assay controls worked well and colour variation was noted among sample wells. The TfR assay (values measured at a wavelength of 450nm) was fine, with graphical output and values of samples in the expected range. There appeared to be, however, a problem in reading the sF assay as, although the controls looked OK visually, the reader gave incorrect readings at the specified wavelength (490nm).

It was determined that the ELISA reader had only been installed 1 week previously and had not been calibrated. The reader was set up by the users (Evans, Irene and Chanda) with the aid of the manual (which wasn’t very useful). The machine was pre-programmed for assays developed by the microplate reader manufacturer and was really too software-orientated for it’s intended purpose in TDRC. The users had established how to read their particular assay (raw data) but did not have a good working knowledge of the machine or of it’s software. However, the assay they were using was not so dependent on actual absorbance values as the sF and sTfR assays. [In fact, their assay could be read visually without recourse to the reader.] Nevertheless, the assay they were reading was read at 450nm, as was sTfR which appeared to be reading correctly using their settings.

After ploughing through the manual the consultant found that, although the correct filters were present, the software had not been programmed correctly. Why this should have affected the reading is unclear as the correct filter was selected, only its label on the wavelength selection button was wrong. A re-run of sF assay controls on day 3 was successful, however it was not evident as to why the plate reader had failed to read the controls correctly previously when these controls looked the same visually as those in the first test run. At this point, the consultant liaised with various TDRC staff and with Richard Suswillo (PCD) as to the possibility of obtaining another machine or whether to go ahead using the machine present. No other reader was forthcoming and the control absorbance values in further sF assays appeared to be correct, so the samples were analysed.

### SERUM FERRITIN AND SOLUBLE TRANSFERRIN RECEPTOR ASSAYS

Although not technically difficult, immunoassays generally are subject to variation when protocols are not followed precisely. Special emphasis was placed on following the assay protocols precisely throughout, keeping records of incubation times and conditions. The large numbers of samples to be analysed necessitated the implementation of meticulous record keeping and cross-checking throughout, from the application of the samples to addition of other reagents and incubation times.

Practical aspects implemented included:

#### **1. Sample and plate preparation**

- Prior to the start of each batch of assays, operators wrote out record sheets for each plate to be assayed.
- Samples for each plate were then collected and sorted into separate racks.
- Sample dilutions were made for the sTfR assay ensuring that the dilutions (samples and controls) were well mixed.
- Plates were labelled with the assay and run number and with the number of the first sample, thus allowing two separate cross checks with the sample data sheet for the assay in question.
- Strips were labelled to allow identification of samples in the event of strips falling out during the washing steps.

#### **2. Setting up and running the assays**

- Plates were loaded with samples one at a time to avoid amassing too many plates for washing and reading at any one time. Initially, each staff member carried out two assays. The consultant supervised the staff throughout these initial runs. On later days, staff were required to complete up to 5 assays (see comments regarding lack of pipettes and wash bottles below).
- Meticulous care was taken when applying standards and samples to wells. It was emphasised that an error in the readings of the standards would invalidate the readings for the entire plate.
- Addition of the conjugate using the Ripette (multi-dispensing pipette) required care to avoid splashing sample-conjugate mix into surrounding wells. Instruction was given on the use of these pipettes. It was emphasised that the tip should be refilled prior to the final dispense to avoid the last well receiving too little conjugate / reagent.

- The plate sealing film needed to be applied firmly but carefully, avoiding splashing of the sample / conjugate mix onto the underside of the film. This occurred once - the absorbance values of samples were severely altered, as noted from values for sample duplicates. It was found that if splashes occurred, pipetting the mix carefully back into the correct well rectified the potential problem.
- The start and end times of incubation steps were written on the plate sealer to ensure correct incubation times. Assays were set up so that the 2 hour initial incubation period fell over the lunch break.
- The plates required careful washing. Care was needed when emptying the wells to prevent the strips from falling into the discard pot. [This is the stage at which running water was most missed as a strip falling into a sink is much easier to retrieve than from a large bucket full of potentially hazardous liquid waste.]
- Safety aspects of the assay reagents were highlighted, most notably care in handling the acid stop solutions.

### **3. Reading the plates**

- Staff were shown how to examine the plates visually. This included noting the expected colour changes in the standard / control wells, noting when discrepancies occurred between duplicate samples and noting samples which were above (out of range) or below (effectively negative) the thresholds of the assay (i.e. above / below the lowest / highest concentration standard or control sample, respectively). The staff became highly proficient at spotting discordant results and errors.
- The consultant produced a protocol for plate reading from the plate reader's manual. This protocol was followed at all times, with emphasis placed on making sure the correct wavelength was selected.
- Plate absorbance values were printed out and attached to the plate sample sheet. The absorbance values of the standards / controls were checked on each plate to ensure that the assay had worked correctly. Only few invalid plates were found and these were entirely due to operator error. Such plates were repeated.

### **4. Interpreting the data**

- Staff were individually shown how to construct calibration curves using the log-log paper provided and how to calculate values for the samples. Owing to lack of time, only a few plates were fully analysed.

### **Specific assay comments:**

#### **sTfR assays**

sTfR assays were started on Day 4 (Friday) and were completed on Day 6 (Tuesday). Staff worked on Saturday to set up the assays for Day 5 (Monday).

#### **Control sera**

Two control sera (normal and high) are supplied with each kit. The manufacturer states that control serum values should be in the appropriate range in order to validate the assay, however, since no values are given, this was somewhat difficult. A calibration curve constructed from the standards seemed to be correct, as determined by comparison with assay descriptions and a pre-

test carried out in London prior to the trip. The assay protocol gives a range for normal values in a test population with a cut-off point above which values are deemed to be high. I have assumed these values for the control samples provided. There was quite a large variation in the values obtained for these control sera between plates (see below for sTfR plates 2 – 9). It remains to be determined whether the actual sTfR values for these controls fall within the ranges specified in the assays as calibration curves were not constructed for all plates.

Control sera absorbance values from runs 2-9

TfR run	Normal control		High control	
	Rep1	Rep2	Rep1	Rep2
2	0.243	0.244	0.414	0.435
3	0.235	0.244	0.505	0.493
4	0.323	0.298	0.505	0.498
5	0.284	0.278	0.437	0.442
6	0.253	0.255	0.449	0.423
7	0.308	0.328	0.474	0.527
8*	1.270	1.117	1.452	1.329
9	0.238	0.250	0.393	0.398

\* control sera were not diluted – plate re-run

### **sF assays**

sTfR assays were started on Day 7 (Wednesday) and were completed on Day 8 (Thursday). Unable to blank the reader so followed Manufacturer's instructions to obtain two readings, at wavelengths 490 and 630nm. This approach, and data, to be discussed with PCD.

### **Other comments:**

It became evident that there was a shortage of pipettes and wash bottles. During the first few days, this was not a problem owing to the different speeds at which the staff worked. However, when all staff were up to speed, delays were encountered.

There was insufficient time for completion of the work. This was due to delays in starting (customs delay) and throughout (due to problems with microplate reader and other technical problems). The delays meant that more plates had to be run by each operator per day than the consultant would have liked. The number of assays running (up to 20 at any one time, 5 per staff member on some days) led to the situation becoming somewhat fraught. The consultant spent more time checking incubation times and washing plates whilst operators were reading previous assays, rather than supervising the work. This led to one of the staff making an error with the standards on 3 plates. This in turn meant that there were 3 plates less available for repeat samples and quality control checks. Hence not all relevant samples were re-analysed and insufficient QC samples were run. This was also due to insufficient numbers of assay kits ordered, the number of which ordered did not allow for error in the controls / standards which meant that whole plates, as opposed to sample duplicates, had to be re-run. Time was also wasted processing the dried serum filter spots, for reasons outlined previously.

We ran out of yellow pipette tips but managed to borrow some.

## **CONCLUSIONS / RECOMMENDATIONS**

### **STAFF:**

The staff employed were all excellent. In particular, Mrs Josephine Bhebhe and Mr Justin Chileshe were outstanding in terms of speed, accuracy and grasp of the assays.

### Recommendation:

It would be difficult to carry out the tasks required with fewer than 4 staff for this number of samples and this time frame.

### **LABORATORY FACILITIES:**

The inconsistency of the water supply at TDRC is obviously beyond the control of PCD (and probably TDRC). Sanitary provisions were made which, although not ideal, were sufficient. In the opinion of the consultant, the waste disposal system was not adequate and needs to be addressed to ensure future safe working practices.

### Recommendations:

Benchkote and autoclave bags should be provided. If running water is not available in the laboratory, alternatives need to be sought for disposal of liquid waste (serum and assay waste).

### **EQUIPMENT AND CONSUMABLES:**

Serious delays were encountered due to problems with the (lack of an) microplate (ELISA) reader and due to insufficient numbers of small equipment and consumable items such as pipettes, racks and pipette tips. Technical problems posed a serious time constraint on the consultant, time which could have been better spent supervising the assays and analysing the raw data. TDRC does not generally have the capacity to provide for such shortages (and pipettes are unlikely to have been serviced thus raising the possibility of variable volumes used).

The number of microfuge tube racks required was seriously underestimated bearing in mind the number of samples, the requirement to make dilutions of these samples and the fact that many assays were run concurrently.

Staff of the Immunology Laboratory generously allowed us to use their microtitre plate reader for this work however there were times when our assays needed to be read at the same time as theirs and obviously, their assays took priority. I was not altogether satisfied with the machine, most notably because it had never been calibrated.

### Recommendations:

Although the research aspect of using filter spots is potentially exciting, using serum is much easier time-wise (making spots and cutting out / eluting spots for analysis), especially since storage facilities at TDRC are good. If transportation is available and provided a cold box / ice packs are available, the assays are much easier and quicker (thus reducing potential errors) with serum. If it is decided to proceed with dried filter spots or if sample transportation is an issue,

then a pilot study is essential to investigate the use of eluted serum from dried filter spots in these assays.

A visit by the WHO / southern Africa malaria group only served to highlight the fact that analyses of malaria infection would serve greatly in complementing this study. It is possible, retrospectively, to analyse the baseline serum samples for malaria infection using a recently-described PCR-based method. Future phases of this work may benefit by adding microscopical examination of blood for malaria parasites (easier, cheaper and quicker than the simple PCR-based technique which does not permit quantification of infection).

Given the increased number of samples that will be involved in the re-survey in September, close consideration should be paid to the staffing levels at TDRC.



## Appendix A

### **TDRC Staff**

JOSEPHINE BHEBHE

– diploma level - clinical chemistry.

Good, v. methodical, bit quick, but realises mistakes and corrects

Widow, 5 children 8-19

Trained phlebotomist

JUSTIN CHILESHE

– degree level – clinical chemistry

Very capable ref. assays and organisation – one of the best members of this staff team

? married, 1 child

BOSTON MBEWE

– degree level has trained at Liverpool poly, not sure in what.

Good, v. methodical, bit slow but realises mistakes and corrects

DANNY MUTALE

- joined us on Weds – diploma level – haematology

Good, v. methodical, and diligent, tries to be as quick as Josie & Justin but did make a couple of errors

Trained phlebotomist

### **TDRC Personnel:**

Dr. Kafwembe	Acting director TDRC
Beatrice	P.A. to Dr. Kafwembe
Alou Ishio	Assistant to Beatrice
Mr. David Mwandu	Clinical chemistry
Dr. Rosemary Musonda	Deputy director TDRC, head immunol (TB, HIV, malaria)
Evans	HIV survey, immunol
Irene	HIV survey, immunol
Chanda Mulenga	dep head immunol
Abu Simukonda	head technologist
Mr. Simba ?	personnel
Brown	driver
Dr. Christine Manyando	malaria + others, PH expert

## **Appendix B**

### **LIST OF CONTACTS**

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